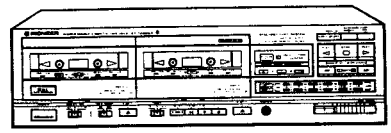
Service Manual



ORDER NO.
ARP1325

STEREO DOUBLE CASSETTE TAPE DECK

CT-1280WR

MODEL CT-1280WR COMES IN SIX VERSIONS DISTINGUISHED AS FOLLOWS:

Type	Power requirement	Destination
KU	AC120V only	U.S.A.
KC	AC120V only	Canada
HEM	AC220V, 240V (switchable)*	European continent
HB	AC220V, 240V (switchable)*	United Kingdom
SD	AC110V, 120V–127V, 220V, 240V (switchable)	General market
SD/G	AC110V, 120V–127V, 220V, 240V (switchable)	U.S. Military

*Change the primary wiring please refer to page 49.

- **This service manual is applicable to the KU type.**
- **As to the KC, HEM, HB, SD and SD/G types, please refer to pages 48 – 56.**
- **Ce manuel d'instruction se refère au mode de réglage, en français.**
- **Este manual de servicio trata del método ajuste escrito en español.**

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1. EXPLODED VIEWS AND PARTS LIST

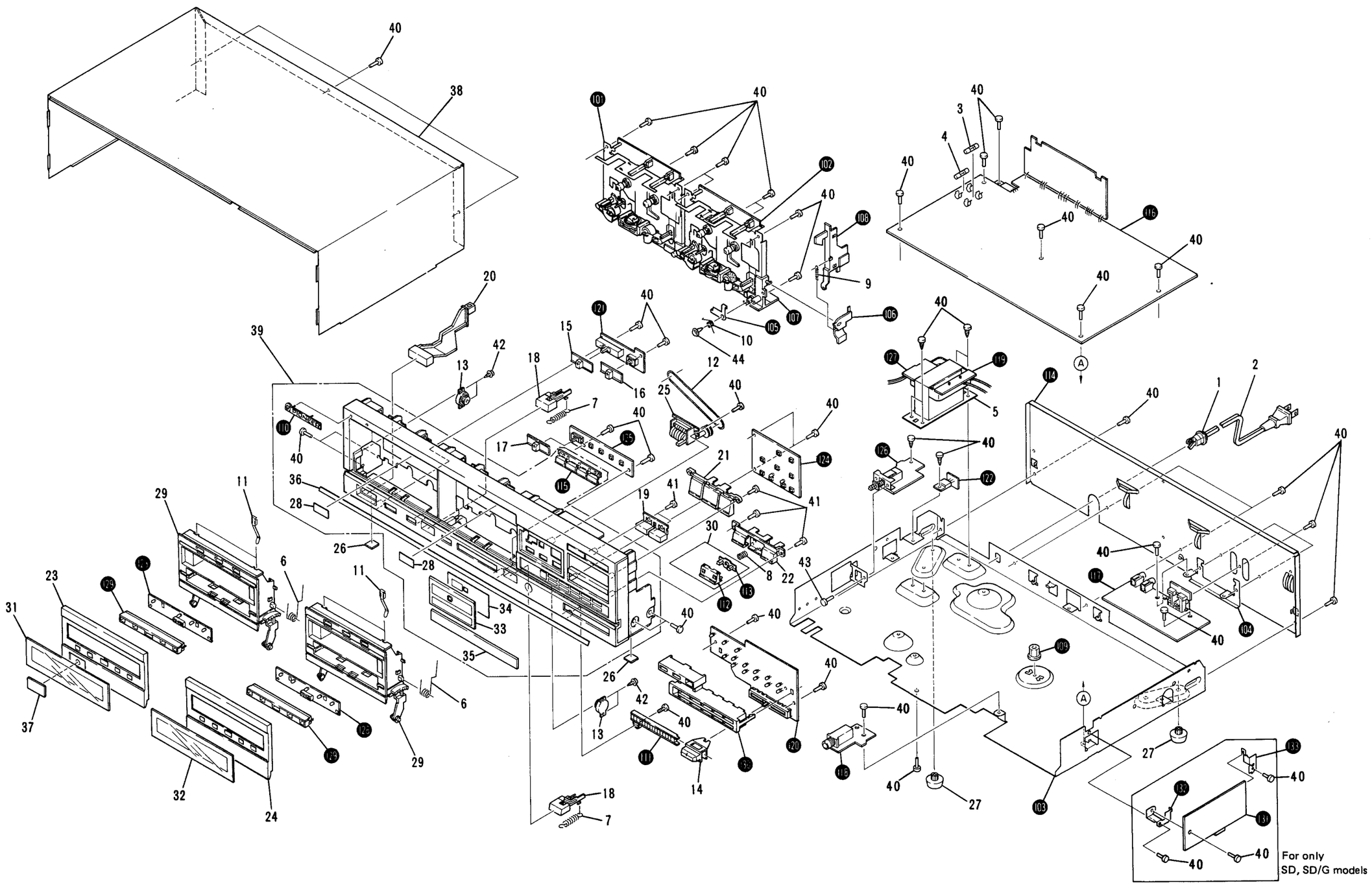
NOTES:

- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*
  ★★ GENERALLY MOVES FASTER THAN ★
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

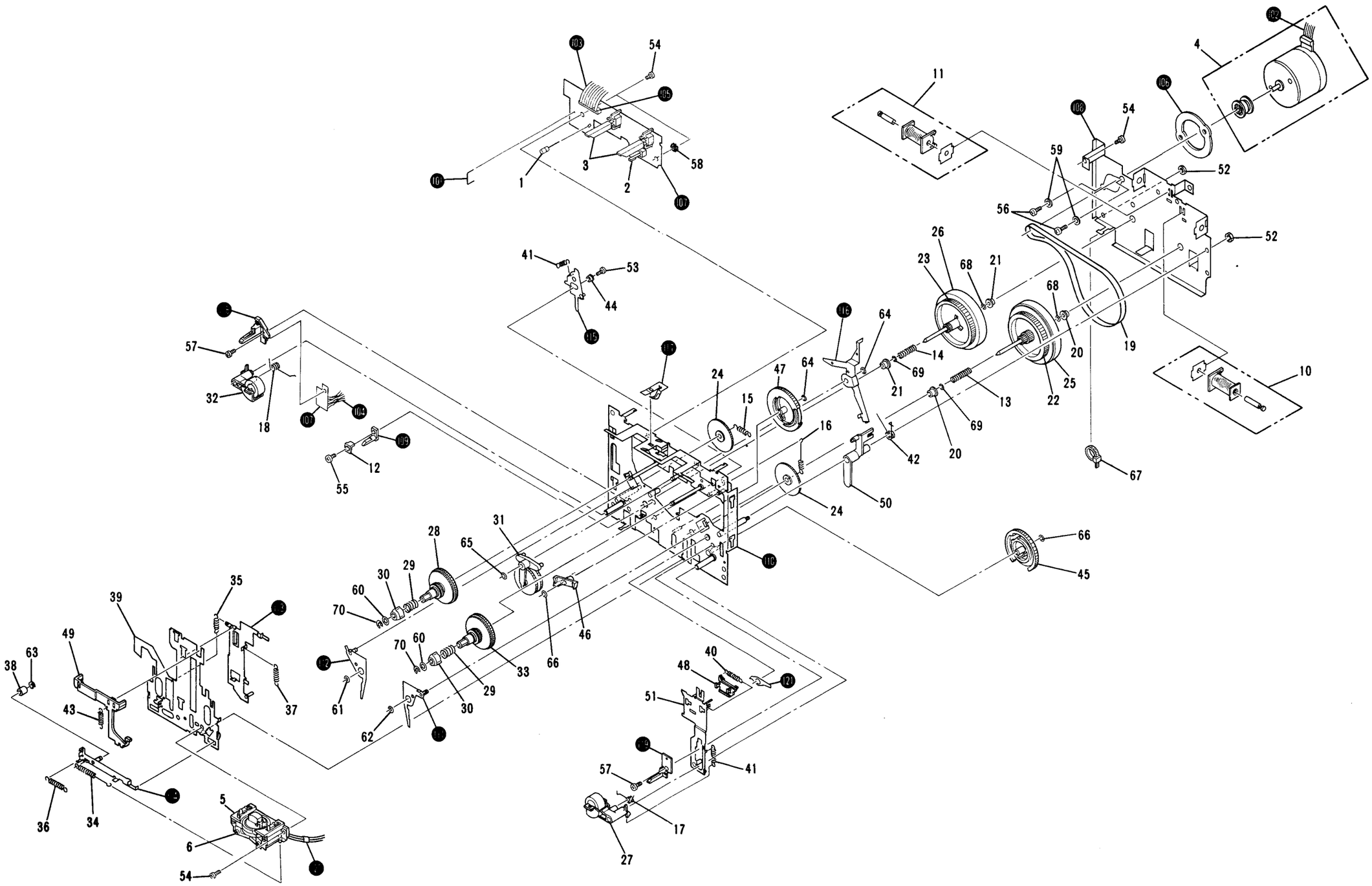
Parts List of Exterior

Mark	No.	Part No.	Description
⚠	1	CM-22	Strain relief
⚠	2	RDG-048	AC power cord
⚠★★	3	REK-073	FU302 Fuse (1.25A)
⚠★★	4	REK-079	FU301 Fuse (800mA)
⚠ ★	5	RTT1020	T1 Power transformer
	6	RBH1077	Door spring
	7	RBH1027	Eject button spring
	8	RBH1028	Button spring
	9	RBH1033	Eject lever spring
	10	RBH1034	Eject prevent spring
	11	RBK1004	Half pressure spring
★★	12	REB1009	Counter belt
	13	REC-436	Door damper
	14	RAC1080	VR knob (REC LEVEL)
	15	RAC1089	Slide knob A (DOLBY NR)
	16	RAC1090	Slide knob B (REV MODE)
	17	RAC1091	Slide knob C (TIMER)
	18	RAC1092	Eject button
	19	RAC1093	Copy button
	20	RAC1095	Power button
	21	RAC1096	Play button
	22	RAC1097	FAST button
	23	RAH1057	Door cover–1
	24	RAH1058	Door cover–2
	25	RAW1004	Counter
	26	REB1004 (REB-513)	Stopper
	27	REC-369	Foot assembly
	28	REE-113	Remain display paper
	29	RNK1058	Door pocket
	30	RXA1031	Deck selector button assembly
	31	RAH1060	Door panel 1
	32	RAH1061	Door panel 2
	33	RAH1062	Display panel
	34	RAH1063	Display panel A
	35	RAH1064	Meter panel
	36	RAH1065	Function panel
	37	RAH1090	Badge
	38	RNA1031	Bonnet case
	39	RXX1015	Front panel assembly
	40	BBZ30P080FMC	Screw 3 x 8
	41	BBZ26P080FMC	Screw 2.6 x 8
	42	ARZ26P060FMC	Screw 2.6 x 6
	43	PMA30P060FMC	Screw 3 x 6
	44	ATZ30P080FMC	Screw 3 x 8
	101		Tape transport unit (Deck I)
	102		Tape transport unit (Deck II)
	103		Main chassis
	104		Jack holder
	105		Eject prevent plate
	106		Eject arm
	107		Eject holder
	108		Eject lever
	109		Board stud
	110		Name plate
	111		VR knob guide
	112		Deck selector button
	113		LED lens
	114		Rear panel
	115		REC button
	116		Main unit
	117		Pin jack unit
	118		Head phone unit
	119		Trans P unit
	120		Level meter unit
	121		Dolby switch unit
	122		Transistor unit
	123		Door display (1) unit
	124		Operation switch unit
	125		REC switch unit
	126		Power switch unit
	127		Trans S unit
	128		Door display (2) unit
	129		LED HOLDER A
	130		LED HOLDER B
	131		dbx unit
	132		PCB Bracket
	133		dbx P.C. board holder

Exterior



Tape Transport Unit (Deck I)



Parts List of Tape Transport Unit (Deck I)

Mark	No.	Part No.	Description
★★	1	DN6851A	Hall IC
★★	2	RSN1005	Leaf switch
★★	3	RSN1006	Leaf switch
★★	4	RXA1082	Motor assembly
★★	5	RXA1085	Head frame assembly (PB)
	6	RBA1023	Azimuth screw
	7	.....	
	8	.....	
	9	.....	
⚠ ★	10	RXP1003	Solenoid F assembly
⚠ ★	11	RXP1004	Solenoid P assembly
	12	REB1014	Cushion
	13	RBH1060	FWF spring
	14	RBH1061	FWR spring
	15	RBH1063	Spring
	16	RBH1067	Spring
	17	RBH1069	Spring
	18	RBH1070	Spring
★★	19	REB1013	Drive belt
	20	RNG1004	Metal
	21	RNG1005	Metal
	22	RNK1101	Flywheel gear (2.5)
	23	RNK1102	Flywheel gear (2.3)
	24	RNK1114	Gear
	25	RXA1068	Flywheel
	26	RXA1069	Flywheel
★★	27	RXA1071	P arm R assembly
	28	RXA1073	R reel assembly
	29	RBH1062	Spring
	30	RNK1112	Reel nail
	31	RXA1067	Drive arm assembly
★★	32	RXA1070	P arm L assembly
	33	RXA1074	F reel assembly
	34	RBH1064	Spring
	35	RBH1065	Spring
	36	RBH1066	Spring
	37	RBH1072	Spring
	38	RLA1028	Collar C
	39	RNE1065	Head board
	40	RBH1058	FR lever spring
	41	RBH1059	Spring
	42	RBH1068	Spring
	43	RBH1074	Spring
	44	RLA1027	Collar
	45	RNK1111	Cam gear
	46	RNK1113	FR arm
	47	RNK1120	Cam gear
	48	RNK1123	Select lever
	49	RNK1124	Brake
	50	RNK1125	Trigger arm

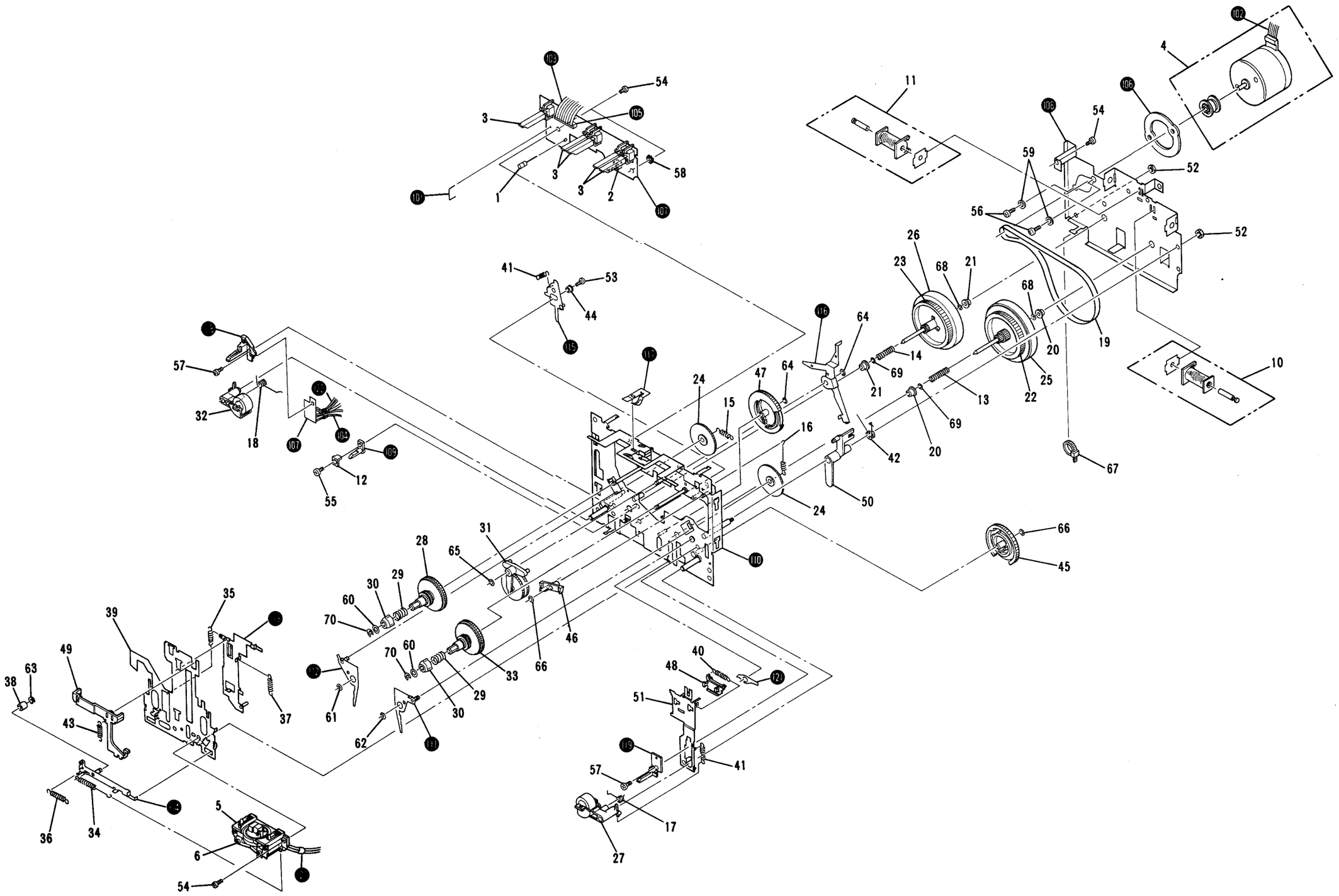
Mark	No.	Part No.	Description
	51	RXA1076	FR lever assembly
	52	NA30FZK	Nut
	53	PCZ20P040FMC	Screw (2 x 4)
	54	PCZ20P060FMC	Screw (2 x 6)
	55	RBA1024	Screw
	56	RBA1028	Screw
	57	RBA1029	Screw
	58	RBE1001	Washer
	59	RBF1003	M washer
	60	RBF1004	M washer
	61	RBF1005	Oil stopper
	62	RBF1006	Oil stopper
	63	RBF1007	P washer
	64	RBF1008	P washer
	65	RBF1010	P washer
	66	RBF1011	P washer
	67	REC-371	Binder
	68	WA26D047D013	Washer
	69	WA26D047D025	Washer
	70	YE15FUC	E ring
	101		Jumper wire D
	102		Jumper wire
	103		Lead wire
	104		Head lead
	105		Cable holder
	106		Spacer
	107		P.C. Board
	108		Flywheel receptacle plate
	109		Cassette guide
	110		Mechanism board assembly
	111		Gear arm R assembly
	112		Gear arm L assembly
	113		Play lever assembly
	114		Head lever assembly
	115		Reverse arm assembly
	116		Play trigger assembly
	117		Cassette stopper
	118		Cassette guide L
	119		Cassette guide R
	120		Tube
	121		CUE arm

Parts List of Tape Transport Unit (Deck II)

Mark	No.	Part No.	Description
★★	1	DN6851A	Hall IC
★★	2	RSN1005	Leaf switch
★★	3	RSN1006	Leaf switch
★★	4	RXA1082	Motor assembly
	5	RXA1083	Head frame assembly (R/P, E)
	6	RBA1023	Azimuth screw
	7	.....	
	8	.....	
	9	.....	
⚠ ★	10	RXP1003	Solenoid F assembly
⚠ ★	11	RXP1004	Solenoid P assembly
	12	REB1014	Cushion
	13	RBH1060	FWF spring
	14	RBH1061	FWR spring
	15	RBH1063	Spring
	16	RBH1067	Spring
	17	RBH1069	Spring
	18	RBH1070	Spring
★★	19	REB1013	Drive belt
	20	RNG1004	Metal
	21	RNG1005	Metal
	22	RNK1101	Flywheel gear (2.5)
	23	RNK1102	Flywheel gear (2.3)
	24	RNK1114	Gear
	25	RXA1068	Flywheel
	26	RXA1069	Flywheel
★★	27	RXA1071	P arm R assembly
	28	RXA1073	R reel assembly
	29	RBH1062	Spring
	30	RNK1112	Reel nail
	31	RXA1067	Drive arm assembly
★★	32	RXA1070	P arm L assembly
	33	RXA1074	F reel assembly
	34	RBH1064	Spring
	35	RBH1065	Spring
	36	RBH1066	Spring
	37	RBH1072	Spring
	38	RLA1028	Collar C
	39	RNE1065	Head board
	40	RBH1058	FR lever spring
	41	RBH1059	Spring
	42	RBH1068	Spring
	43	RBH1074	Spring
	44	RLA1027	Collar
	45	RNK1111	Cam gear
	46	RNK1113	FR arm
	47	RNK1120	Cam gear
	48	RNK1123	Select lever
	49	RNK1124	Brake
	50	RNK1125	Trigger arm

Mark	No.	Part No.	Description
	51	RXA1076	FR lever assembly
	52	NA30FZK	Nut
	53	PCZ20P040FMC	Screw (2 x 4)
	54	PCZ20P060FMC	Screw (2 x 6)
	55	RBA1024	Screw
	56	RBA1028	Screw
	57	RBA1029	Screw
	58	RBE1001	Washer
	59	RBF1003	M washer
	60	RBF1004	M washer
	61	RBF1005	Oil stopper
	62	RBF1006	Oil stopper
	63	RBF1007	P washer
	64	RBF1008	P washer
	65	RBF1010	P washer
	66	RBF1011	P washer
	67	REC-371	Binder
	68	WA26D047D013	Washer
	69	WA26D047D025	Washer
	70	YE15FUC	E ring
	101		Jumper wire D
	102		Jumper wire
	103		Lead wire
	104		Head lead
	105		Cable holder
	106		Spacer
	107		P.C. board
	108		Flywheel receptacle plate
	109		Cassette guide
	110		Mechanism boad assembly
	111		Gear arm R assembly
	112		Gear arm L assembly
	113		Play lever assembly
	114		Head lever assembly
	115		Reverse arm assembly
	116		Play trigger assembly
	117		Cassette stopper
	118		Cassette guide L
	119		Cassette guide R
	120		Tube
	121		CUE arm
	122		Head lead

Tape Transport Unit (Deck II)



2. PA

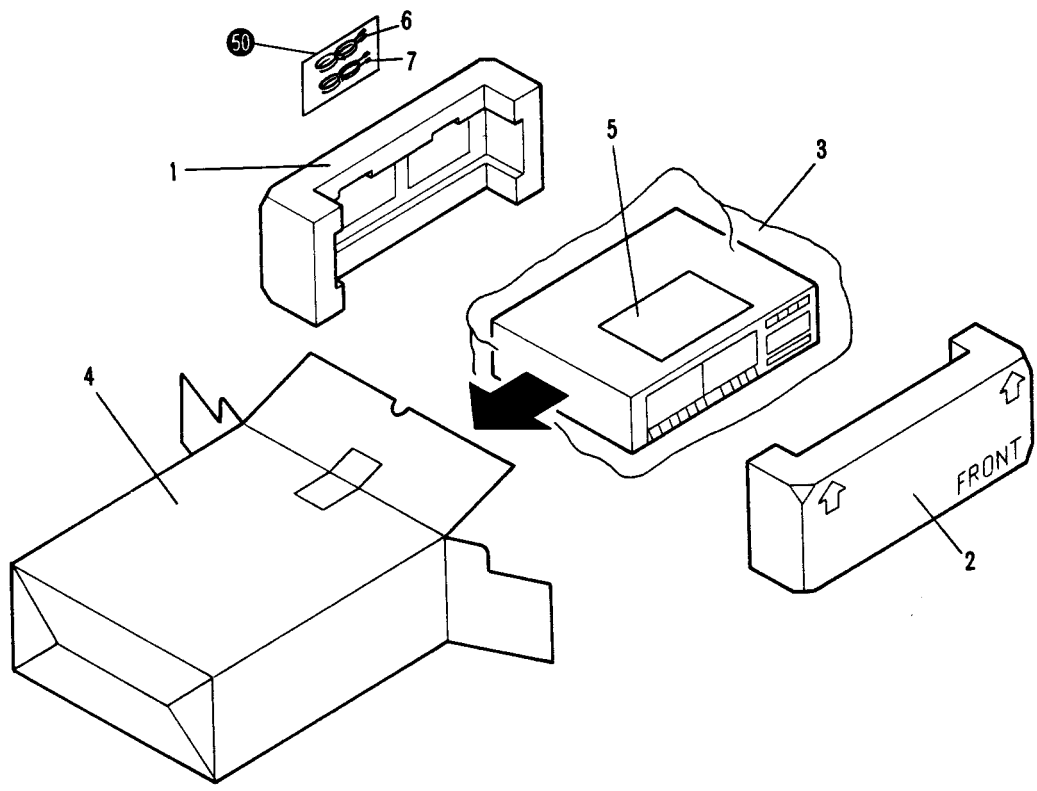
Parts Lis

Mark	No
	1
	2
	3
	4
	5
	6
	7
	50

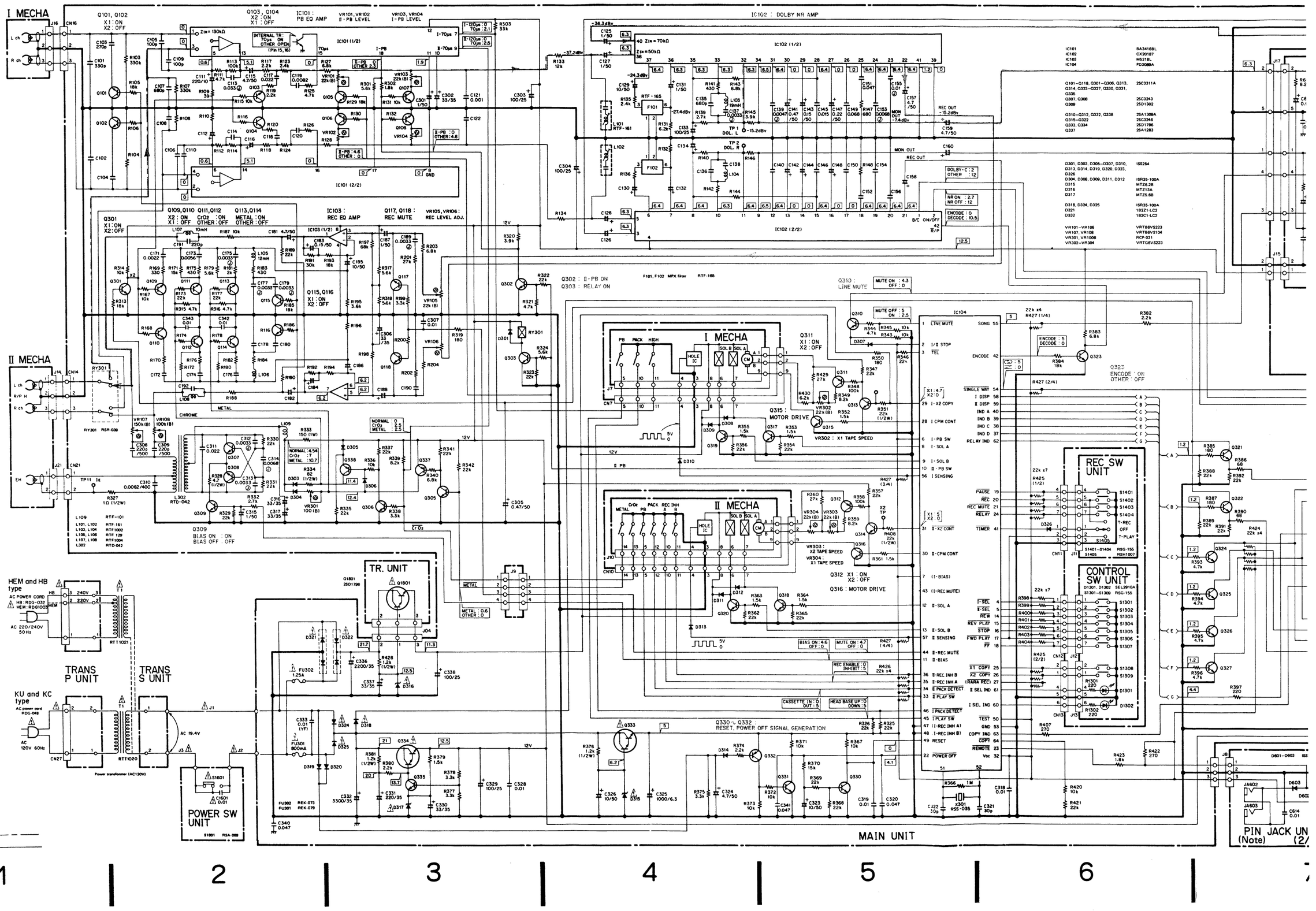
2. PACKING

Parts List of Packing

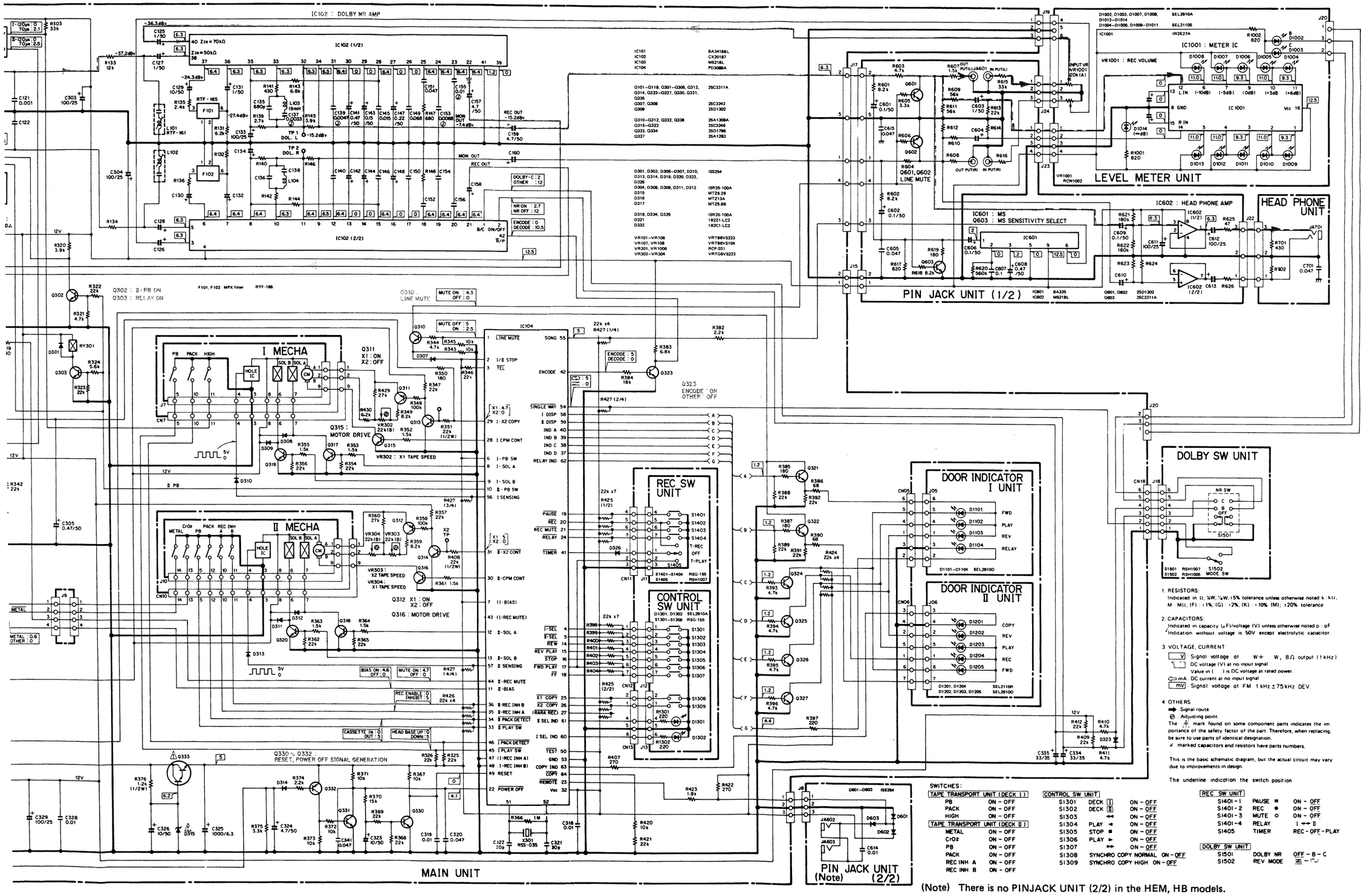
Mark	No.	Part No.	Description
	1	RHA1006	Pad A
	2	RHA1007	Pad B
	3	RHC-161	Styrene paper
	4	RHG1014	Packing case
	5	RRB1006	Operating instructions
	6	RDE-087	Control Cord
	7	RDE-010	Connection cord
	50		Connection cord assembly



3. SCHEMATIC DIAGRAM



NOTE:
The indicated semiconductors are representative ones only. Other alternative semiconductors may be used and are listed in the parts list.


IC102 : DOLBY NR AMP
IC102 (1/2)
IC102 (2/2)
IC101 BA3416BL
IC102 CX20187
IC103 M5218L
IC104 PD3088A
Q101–Q118, Q301–Q306, Q313, Q314, Q323–Q327, Q330, Q331, Q335 2SC3311A
Q307, Q308 2SC3243
Q309 2SD1302
Q310–Q312, Q332, Q338 2SA1308A
Q315–Q322 2SC3246
Q333, Q334 2SD1796
Q337 2SA1283
D301, D303, D305–D307, D310, D313, D314, D319, D320, D323, D326 1SS254
D304, D308, D309, D311, D312 ISR35-100A
D315 MTZ6.2B
D316 MTZ13A
D317 MTZ5.6B
D318, D324, D325 ISR35-100A
D321 1B221-LC2
D332 1B2C1-LC2
VR101–VR106 VRT86VS223
VR107, VR108 VRT86VS104
VR301, VR1008 RCP-031
VR302–VR304 VRTG6VS223
F101, F102 MPX filter RTF-166
Q302 : II-PB ON
Q303 : RELAY ON
Q310 : LINE MUTE
Q311 X1 : ON X2 : OFF
Q312 X1 : ON X2 : OFF
Q315 : MOTOR DRIVE
Q316 : MOTOR DRIVE
Q323 ENCODE : ON OTHER : OFF
Q330~Q333 : RESET, POWER OFF SIGNAL GENERATION
I MECHA
II MECHA
IC104
REC SW UNIT
CONTROL SW UNIT
D1301, D1302 SEL2910A
S1301–S1309 RSG-155
S1401–S1404 RSG-155
S1405 RSH1007
MAIN UNIT
PIN JACK UNIT (1/2)
IC601 : MS
Q603 : MS SENSITIVITY SELECT
IC602 : HEAD PHONE AMP
Q601, Q602 LINE MUTE
IC601 BA335
IC602 M5218L
Q601, Q602 2SD1302
Q603 2SC3311A
LEVEL METER UNIT
IC1001 : METER IC
VR1001 : REC VOLUME
D1002, D1003, D1007, D1008, D1012–D1014 SEL2910A
D1004–D1006, D1009–D1011 SEL2110S
IC1001 IR2E27A
HEAD PHONE UNIT
DOLBY SW UNIT
DOOR INDICATOR I UNIT
DOOR INDICATOR II UNIT
D1101–D1104 SEL2910D
D1201, D1204 D1202, D1203, D1205 SEL2110R SEL2910D
PIN JACK UNIT (Note) (2/2)
D601–D603 1SS254
S1501 RSH1007 S1502 RSH1006 MODE SW
SWITCHES:
TAPE TRANSPORT UNIT (DECK I)
PB ON – OFF
PACK ON – OFF
HIGH ON – OFF
TAPE TRANSPORT UNIT (DECK II)
METAL ON – OFF
CrO2 ON – OFF
PB ON – OFF
PACK ON – OFF
REC INH A ON – OFF
REC INH B ON – OFF
CONTROL SW UNIT
S1301 DECK I ON – OFF
S1302 DECK II ON – OFF
S1303 ◄◄ ON – OFF
S1304 PLAY ◄ ON – OFF
S1305 STOP ■ ON – OFF
S1306 PLAY ► ON – OFF
S1307 ►► ON – OFF
S1308 SYNCHRO COPY NORMAL ON – OFF
S1309 SYNCHRO COPY HIGH ON – OFF
REC SW UNIT
S1401-1 PAUSE II ON – OFF
S1401-2 REC ● ON – OFF
S1401-3 MUTE ○ ON – OFF
S1401-4 RELAY I ⇔ II
S1405 TIMER REC – OFF – PLAY
DOLBY SW UNIT
S1501 DOLBY NR OFF – B – C
S1502 REV MODE

(Note) There is no PINJACK UNIT (2/2) in the HEM, HB models.

1. RESISTORS:
Indicated in Ω, ¼W, ½W, ±5% tolerance unless otherwise noted k : kΩ, M : MΩ, (F) : ±1%, (G) : ±2%, (K) : ±10% (M); ±20% tolerance

2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p : pF
Indication without voltage is 50V except electrolytic capacitor.

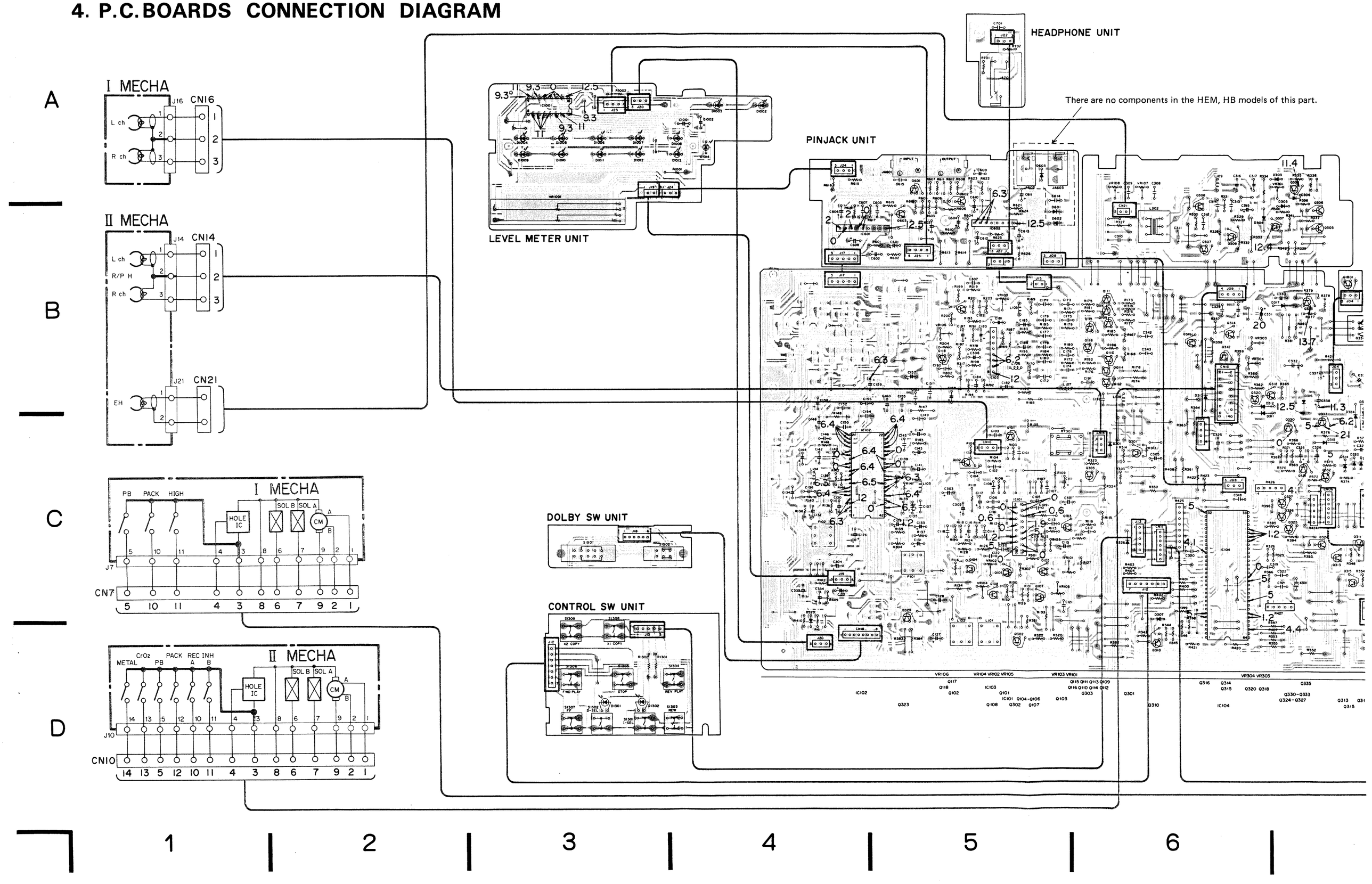
3. VOLTAGE, CURRENT
V : Signal voltage at W+ W, 8Ω output (1 kHz)
DC voltage (V) at no input signal
Value in ( ) is DC voltage at rated power.
mA : DC current at no input signal
mV : Signal voltage at FM 1 kHz ± 75 kHz DEV.

4 OTHERS
Signal route.
Adjusting point.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
marked capacitors and resistors have parts numbers.

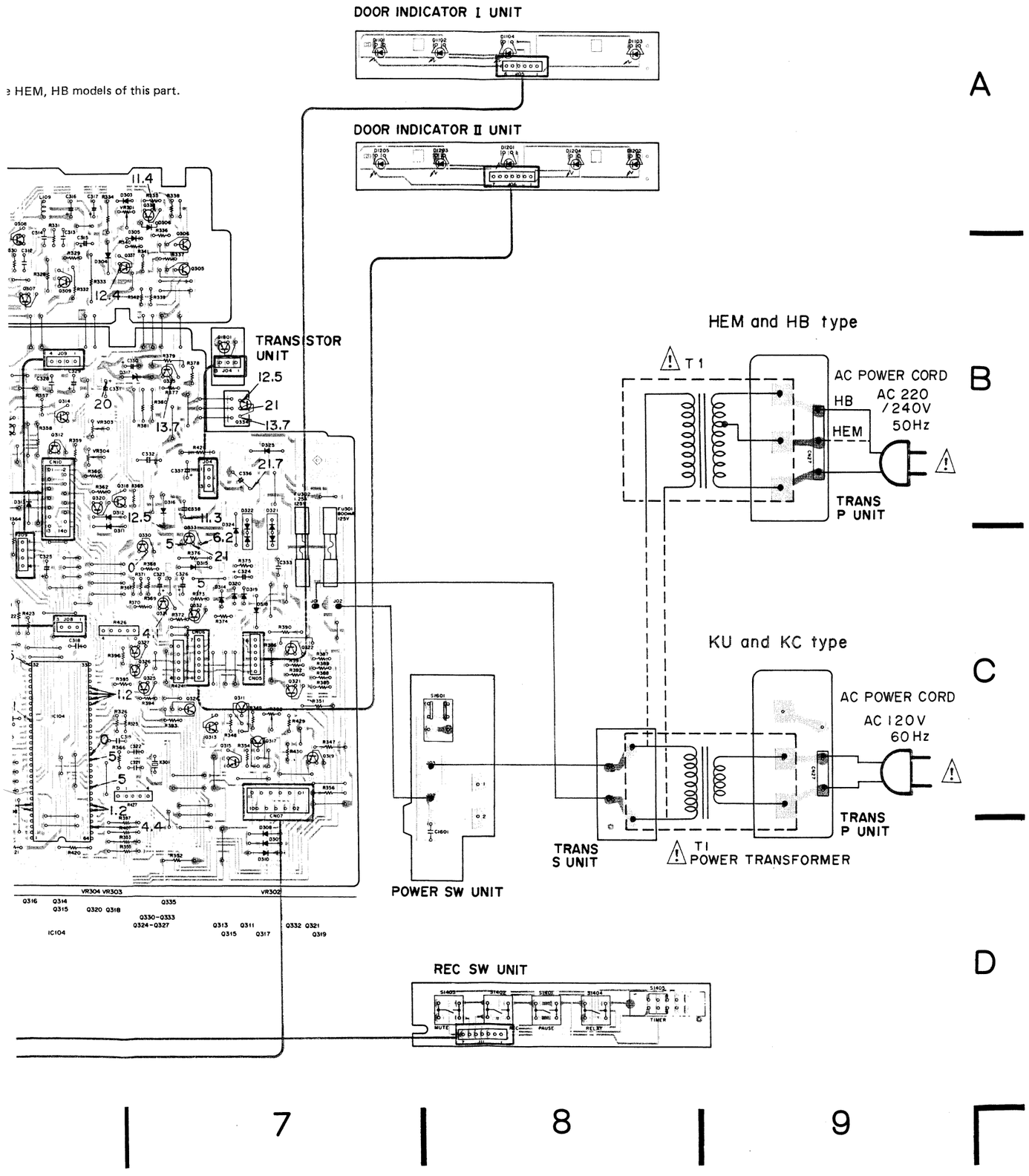
This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

The underline indication the switch position

4. P.C.BOARDS CONNECTION DIAGRAM

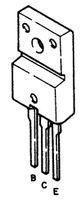


: HEM, HB models of this part.

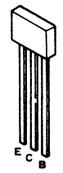


External Appearance of Transistors and ICs

2SD1796



2SC3311A
2SA1309A



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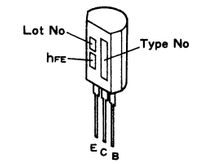

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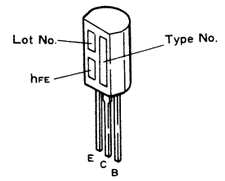
2SA1283



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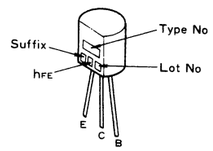
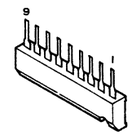
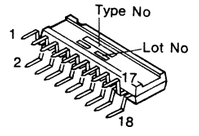


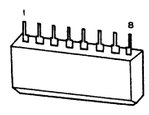
BA335



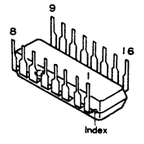
BA3416BL



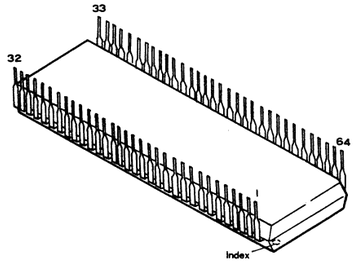
M5218L



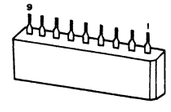
1R2E27A



PD3089A



CX20187



5. ELECTRICAL PARTS LIST

NOTES:

- *Parts without part number cannot be supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*
  ★★ GENERALLY MOVES FASTER THAN ★
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω	*56 × 10¹*	*561*	*RD1/4PS 5 6 1 J*
47kΩ	*47 × 10³*	*473*	*RD1/4PS 4 7 3 J*
0.5Ω	*0R5*		*RN2H 0 R 5 K*
1Ω	*010*		*RS1P 0 1 0 K*

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ	*562 × 10¹*	*5621*	*RN1/4SR 5 6 2 1 F*

Miscellaneous Parts

P.C. BOARD ASSEMBLIES

Mark	Symbol & Description	Part No.
	Main unit	
	Pin jack unit	
	Head one unit	
	Level meter unit	
	Dolby SW unit	
	Trans P unit*	
	Transistor unit	
	Door display (1) unit	
	Door display (2) unit	
	Operation SW unit	
	REC SW unit	
	Power SW unit	
	Trans S unit*	

OTHERS

Mark	Symbol & Description	Part No.
⚠	Strain relief	CM-22
⚠	AC power cord	RDG-048
⚠ ★★	FU302 Fuse (1.25A)	REK-073
⚠ ★★	FU301 Fuse (800mA)	REK-079
⚠ ★	T1 Power transformer (AC120V)	RTT1020
	Tape transport unit (Deck I)*	
	Tape transport unit (Deck II)*	

Main Unit

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC101	BA3416BL
★★	IC102	CX20187
★★	IC103	M5218L
★★	IC104	PD3089A
★★	Q101–Q118, Q301–Q303, Q305, Q306, Q313, Q314, Q323–Q327, Q330, Q331, Q335	2SC3311A
★★	Q307, Q308	2SC3243
★★	Q309	2SD1302
★★	Q310–Q312, Q332, Q338	2SA1309A
★★	Q315–Q322	2SC3246
⚠ ★★	Q333, Q334	2SD1796
★★	Q337	2SA1283
★	D301, D303, D305–D307, D310, D313, D314, D319, D320, D323, D326	ISS254
★	D304, D308, D309, D311, D312	ISR35-100A
⚠ ★	D315	MTZ6.2B
⚠ ★	D316	MTZ13A
⚠ ★	D317	MTZ5.6B
⚠ ★	D318, D324, D325	ISR35-100A
⚠ ★	D321	1B2Z1-LC2
⚠ ★	D322	1B2C1-LC2

RELAY

Mark	Symbol & Description	Part No.
★★	RY301	RSR-039

COILS AND FILTERS

Mark	Symbol & Description	Part No.
	L101, L102 Trap coil	RTF-161
	L103, L104 Coil (19mH)	RTF1002
	L105, L106 Peaking coil	RTF-129
	L107, L108 Coil (10mH)	RTF1004
	L302 Oscillator coil	RTD-042
	L109 Line coil	RTF-101
	F101, F102 MPX filter	RTF-165

CAPACITORS

Mark	Symbol & Description	Part No.
	C101, C102	CKPUYB331K50
	C103, C104	CKPUYB271K50
	C105, C106, C109, C110	CKPUYB101K50
	C107, C108, C135, C136	CKPUYB681K50
	C111, C112	CEAS221M10
	C113, C114	CQMA333J50
	C115, C116, C157–C160, C181, C182, C324	CEAS4R7M50
	C117, C118, C311	CQMA223K50
	C119, C120	CQMA822K50
	C121, C122	CKPUYB102K50
	C125–C128, C131, C132, C187, C188, C301, C315	CEAS010M50
	C129, C130, C185, C186, C323, C326	CEAS100M50
	C133, C134, C303, C304, C329, C338	CEAS101M25
	C137, C138, C175–C180, C189, C190, C312, C313	CQMA332J50
	C139, C140	CQMA472J50
	C141, C142, C305	CEASR47M50
	C143, C144, C183, C184	CEASR15M50
	C145, C146	CQMA153K50
	C147, C148,	CEASR22M50
	C149, C150	CQMA683K50
	C151, C152	CQMA473K50
	C153, C154, C314	CQMA682J50
	C155, C156	CQMA103J50
	C171, C172	CQMA222K50
	C173, C174	CQMA562K50
	C191, C192	CCCSL221J50
	C302, C306, C316, C317, C330, C334, C335, C337	CEAS330M35
	C307, C318, C319, C328, C333, C342, C343	CKCYF103Z50
	C308, C309	CCCSL221K500
	C310	CQPA822J400
	C321, C322	CCPUSL300J50
	C325	CEAS102M6R3
	C331	CEAS221M35
	C332	CEAS332M35
	C336	CEAS222M35
	C340, C341, C320	CGCYX473M25

RESISTORS

Mark	Symbol & Description	Part No.
★	VR101–VR106 Semi-fixed (22kΩ)	VRTB6VS223
★	VR107, VR108 Semi-fixed (100kΩ)	VRTB6VS104
★	VR301 Semi fixed (100Ω)	RCP-031
★	VR302–VR304 Semi-fixed (22kΩ)	VRTG6VS223
	R333	RS1LF151J
	R424, R426, R427	RA4S223J
	R425	RA7S223J
	R327, R351, R408	RD1/2LF □□□J
	R328, R334, R376, R381, R428	RD1/2PMF □□□J
	R109–R112, R133, R134, R147, R148, R174, R178, R187, R188, R317, R324, R332, R347, R350, R352, R353, R355, R356, R358, R361, R363, R364, R379, R380, R382–R384, R386, R390, R397, R400, R401, R407, R420, R422	RD1/4PM □□□J
	Other resistors	RD1/6PM □□□J

OTHERS

Mark	Symbol & Description	Part No.
	X301 Ceramic resonator	RSS-035

Pin Jack Unit

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC601	BA335
★★	IC602	M5218L
★★	Q601, Q602	2SD1302
★★	Q603	2SC3311A
★	D601–D603	ISS254

CAPACITORS

Mark	Symbol & Description	Part No.
	C601, C602, C606, C609, C610	CEASR10M50
	C603, C604	CEAS010M50
	C605, C615	CGCYX473M25
	C607	CQMA104K50
	C608	CEASR47M50
	C611–C613	CEAS101M25
	C614	CKCYF103Z50

RESISTORS

Mark	Symbol & Description	Part No.
	R613, R614	RD1/4PM223J
	R601–R612, R615–R626	RD1/6PM □□□J

OTHERS

Mark	Symbol & Description	Part No.
	JA601	
	JA602	

Headphone U

CAPACITORS

Mark	Symbol & Description	Part No.
	C701	

RESISTORS

Mark	Symbol & Description	Part No.
	R701,	

OTHERS

Mark	Symbol & Description	Part No.
	JA701	

Level Meter

SEMICONDU

Mark	Symbol & Description	Part No.
★★	IC100	
★	D100	
	D101	
★	D100	

CAPACITORS

Mark	Symbol & Description	Part No.
	C1001	

RESISTORS

Mark	Symbol & Description	Part No.
★	VR10	
	R1001	

Dolby SW U

SWITCHES

Mark	Symbol & Description	Part No.
★★	S1501	
★★	S1502	

OTHERS

Mark	Symbol & Description	Part No.
	JA601 Pin jack 4P	RKB1001
	JA602, JA603 Remote control jack	RKK1004

Headphone Unit

CAPACITORS

Mark	Symbol & Description	Part No.
	C701	CGCYX473M25

RESISTORS

Mark	Symbol & Description	Part No.
	R701, R702	RD1/6PM431J

OTHERS

Mark	Symbol & Description	Part No.
	JA701 Headphone jack	RKK1001

Level Meter Unit

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	IC1001	IR2E27A
★	D1002, D1003, D1007, D1008, D1012–D1014 (LED)	SEL2910A
★	D1004–D1006, D1009–D1011 (LED)	SEL2110S

CAPACITORS

Mark	Symbol & Description	Part No.
	C1001, C1002	CEAS100M50

RESISTORS

Mark	Symbol & Description	Part No.
★	VR1001 Slide volume 20k (A)	RCW1002
	R1001, R1002	RD1/4PM821J

Dolby SW Unit

SWITCHES

Mark	Symbol & Description	Part No.
★★	S1501 Slide switch	RSH1007
★★	S1502 Slide switch	RSH1006

Transistor Unit

SEMICONDUCTOR

Mark	Symbol & Description	Part No.
⚠ ★★	Q1801	2SD1796

Door Display (1) Unit

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★	D1101–D1104	SEL2910D

Door Display (2) Unit

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★	D1201, D1204	SEL2110R
★	D1202, D1203, D1205	SEL2910D

Operation SW Unit

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★	D1301, D1302	SEL2910A

SWITCHES

Mark	Symbol & Description	Part No.
★★	S1301–S1309 Tact switch	RSG-155

RESISTORS

Mark	Symbol & Description	Part No.
	R1301, R1302	RD1/4PM221J

REC SW Unit

SWITCHES

Mark	Symbol & Description	Part No.
★★	S1401–S1404 Tact switch	RSG-155
★★	S1405 Slide switch	RSH1007

Power SW Unit

SWITCH

Mark	Symbol & Description	Part No.
⚠ ★★	S1601 Power switch	RSA-069

CAPACITOR

Mark	Symbol & Description	Part No.
⚠	C1601	CKCYF103Z50

*Trans P Unit

There are no supply parts in this UNIT.

*Trans S Unit

There are no supply parts in this UNIT.

*Tape Transport Unit

Mark	Symbol & Description	Part No.
★★	Hall IC	DN6851
★★	Leaf switch	RSN1005
★★	Leaf switch	RSN1006
★★	Head frame assembly (P B)	RXA1085
★★	Head frame assembly (R/P E)	RXA1083
★★	Motor assembly	RXA1082
⚠ ★	Solenoid F assembly	RXP1003
⚠ ★	Solenoid P assembly	RXP1004

MAIN UNIT

The Main Unit (for CT-1280WR/SD and SD/G types) is the same as the Main Unit (for CT-1280WR/KU type) with the exception of following sections:

Mark	Symbol & Description	Part No.			Remarks
		CT-1280WR/ KU type	CT-1280WR/ SD type	CT-1280WR/ SD/G type	
	C159, C160	CEAS4R7M50	CEAS330M35	CEAS330M35	
	C161–C170	.....	CEAS100M50	CEAS100M50	
	C327	.....	CEAS330M35	CEAS330M35	
	CN28	.....	RKP-590	RKP-590	
	D327, D328	.....	ISS254	ISS254	
	IC105, IC106	.....	TC4066BP	TC4066BP	
	Q328, Q329, Q336, Q339	.....	2SC3311A	2SC3311A	
	R149, R150, R161	.....	RD1/4PM473J	RD1/4PM473J	
	R151, R152, R162, R308, R309, R311, R312	.....	RD1/6PM473J	RD1/6PM473J	
	R153, R154	.....	RD1/6PM683J	RD1/6PM683J	
	R155, R156	.....	RD1/6PM183J	RD1/6PM183J	
	R157, R158, R163–R166, R307, R310, R416	.....	RD1/6PM223J	RD1/6PM223J	
	R159, R160	.....	RD1/4PM113J	RD1/4PM113J	
	R305, R306	.....	RD1/6PM562J	RD1/6PM562J	
	R413, R417	.....	RD1/6PM682J	RD1/6PM682J	
	R414	.....	RD1/6PM182J	RD1/6PM182J	
	R415	.....	RD1/6PM472J	RD1/6PM472J	
	R418	.....	RD1/6PM333J	RD1/6PM333J	

LEVEL METER UNIT

The level meter unit (for CT-1280WR/SD and SD/G types) in the same as the level meter unit (for CT-1280 WR/KU types) with the exception of following sections:

Mark	Symbol & Description	Part No.			Remarks
		CT-1280WR/ KU type	CT-1280WR/ SD type	CT-1280WR/ SD/G type	
	D1001	.....	SEL2110S	SEL2110S	

DOLBY & DBX SWITCH UNIT

The Dolby & dbx switch unit (for CT-1280WR/SD and SD/G types) is the same as the Dolby switch unit (for CT1280WR/KU type) with the exception of following.

Mark	Symbol & Description	Part No.			Remarks
		CT-1280WR/ KU type	CT-1280WR/ SD type	CT-1280WR/ SD/G type	
	S501	.....	RSH1008	RSH1008	
	S502	.....	RSH1006	RSH1006	
	S1501	RSH1007	.....	.....	
	S1502	RSH1006	.....	.....	

dbx Unit

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★	Q913	AN6291
★★	Q914	M5218L
★★	Q901 – Q912, Q915, Q919	2SC1740SLN
★★	Q916 – Q918	2SA933S
⚠ ★	D903	MTZ5.6A (MTZ5.6B) (RD5.6EB1) (RD5.6EB2)
★	D901, D902	1S2473

CAPACITORS

Mark	Symbol & Description	Part No.
	C946	CEA101M16
	C947	CEA331M10
	C939, C940, C945	CEA330M16
	C925, C926, C948	CEA470M10
	C929, C930, C936, C943, C944	CEA100M16
	C949	CEA4R7M50
	C935, C937, C938	CEA010M50
	C917, C918 Electrolytic (10/16, NL)	RCH-069 (RCH-070)
	C919, C920 Electrolytic (0.68/50, NL)	RCH-073 (RCH-074)
	C913, C914	CEAR33M50
	C901, C902	CEAR22M50
	C941, C942	CCDSL181J50
	C903 – C906	CQMA104J50
	C915, C916	CQMA333J50
	C923, C924, C933, C934	CQMA223J50
	C927, C928	CQMA472J50
	C907 – C910	CQMA332J50
	C921, C922	CQSA471J50
	C931, C932	CQSA391J50
	C911, C912	CQSA331J50

RESISTORS

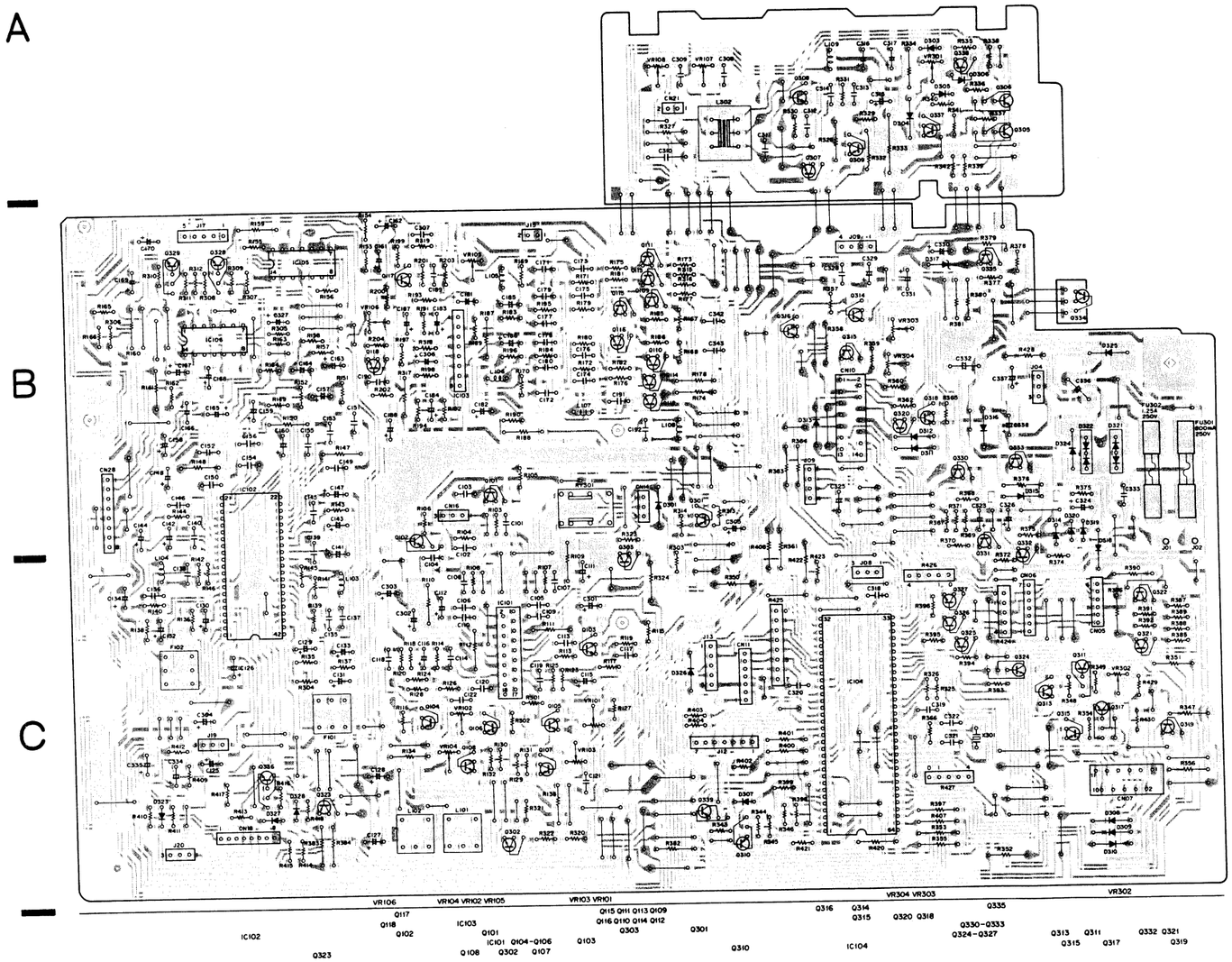
Mark	Symbol & Description	Part No.
★	VR901 Semi-fixed (2.2k)	VRTB6VS222
	R912, R914, R942, R916, R958, R959,	RD1/4PM □□□J
	R957	RN1/4PQ1001F
	Other resistors	RD1/6PM □□□J

OTHERS

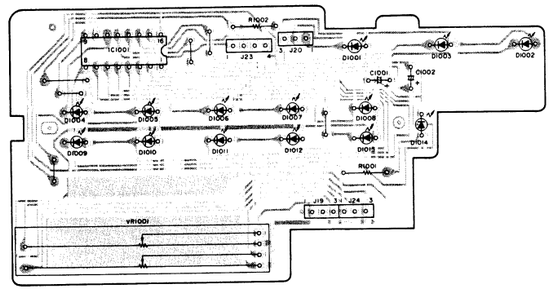
Mark	Symbol & Description	Part No.
	CN90 Connector socket 8.P	RKP-602

P.C. BOARD PATTERNS

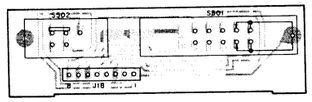
MAIN UNIT



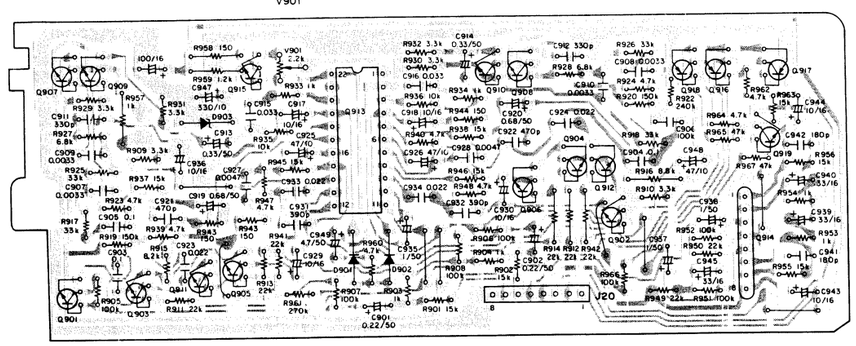
LEVELMETER UNIT



DOLBY & DBX SWITCH UNIT

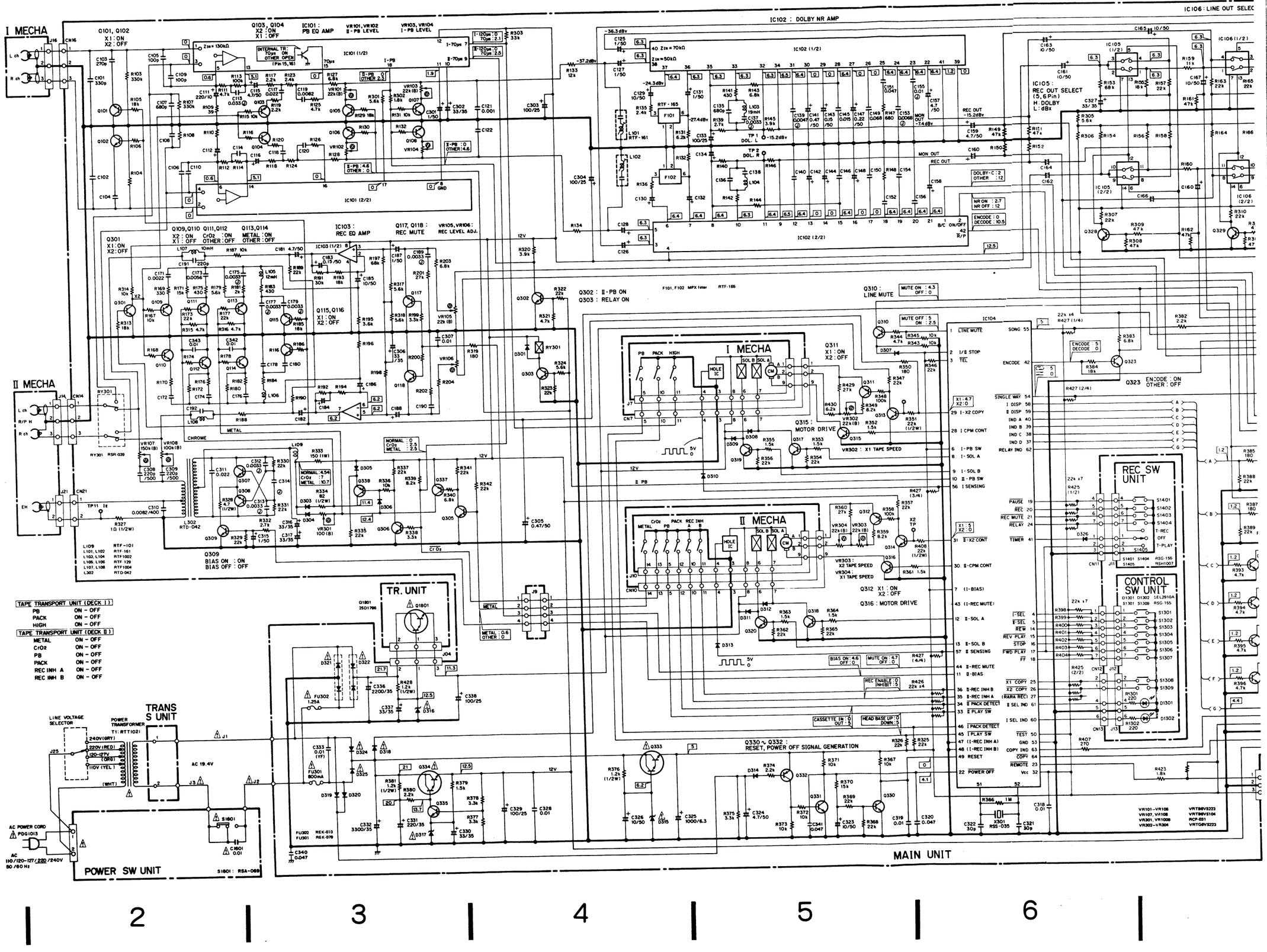


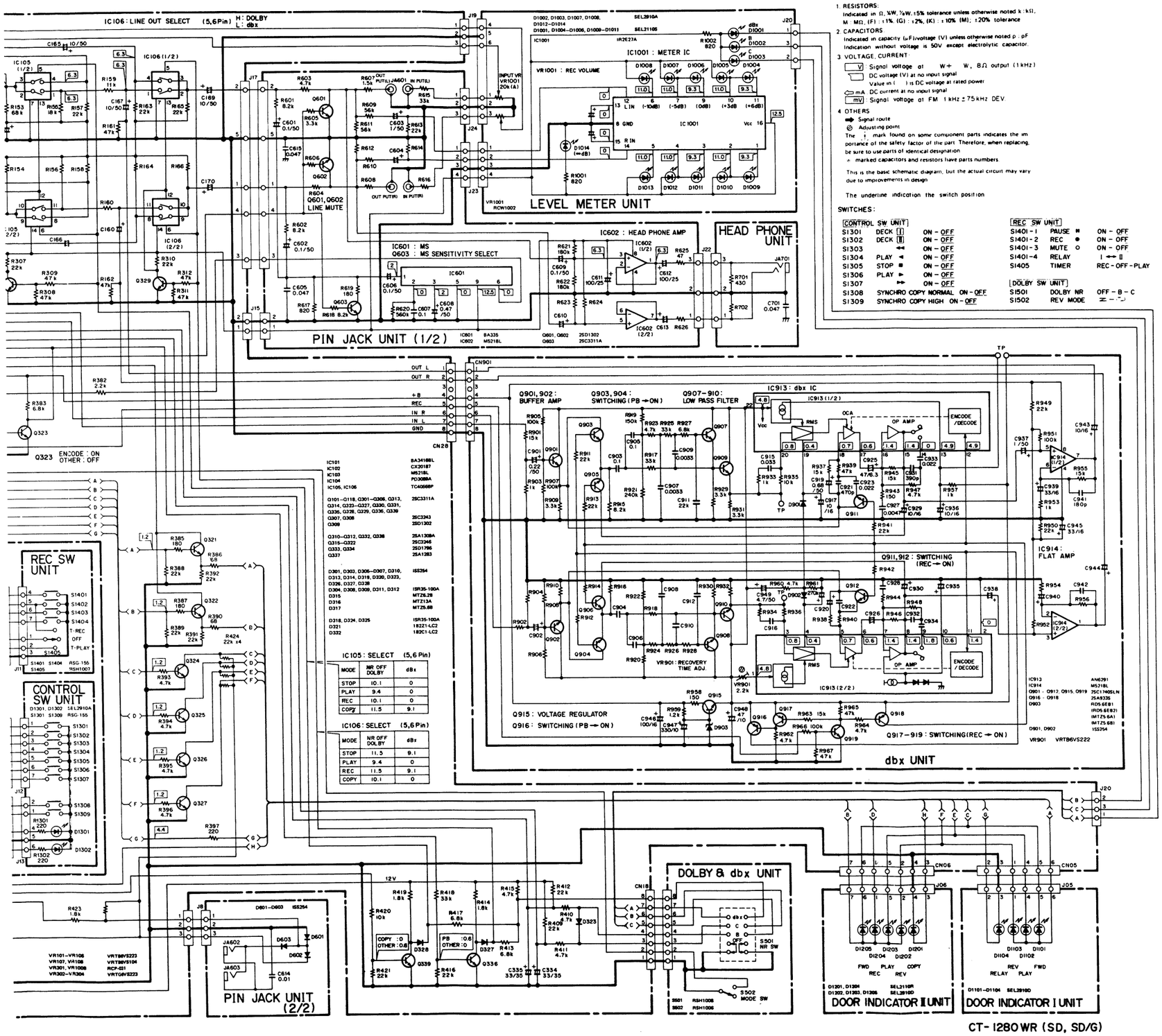
DBX UNIT



CT-1280WR/SD,SD/G

SCHEMATIC DIAGRAM


I MECHA
II MECHA
Q101, Q102 X1 : ON X2 : OFF
Q103, Q104 X2 : ON X1 : OFF
IC101 : PB EQ AMP
VR101, VR102 II - PB LEVEL
VR103, VR104 I - PB LEVEL
IC101 (1/2)
IC101 (2/2)
IC102 : DOLBY NR AMP
IC102 (1/2)
IC102 (2/2)
IC105 : REC OUT SELECT (5, 6 Pin) H : DOLBY L : dBx
IC106 : LINE OUT SELEC
IC106 (1/2)
IC106 (2/2)
Q301 X1 : ON X2 : OFF
Q109, Q110 Q111, Q112 X2 : ON CrO2 : ON X1 : OFF OTHER : OFF
Q113, Q114 METAL : ON OTHER : OFF
IC103 : REC EQ AMP
Q117, Q118 : REC MUTE
VR105, VR106 : REC LEVEL ADJ.
Q115, Q116 X1 : ON X2 : OFF
Q302 : II-PB ON
Q303 : RELAY ON
F101, F102 MPX filter RTF-166
Q310 : LINE MUTE
Q311 X1 : ON X2 : OFF
Q315 : MOTOR DRIVE
VR302 : X1 TAPE SPEED
Q312 X1 : ON X2 : OFF
Q316 : MOTOR DRIVE
VR303 : X2 TAPE SPEED
VR304 : X1 TAPE SPEED
Q330 ~ Q332 : RESET, POWER OFF SIGNAL GENERATION
Q309 BIAS ON : ON BIAS OFF : OFF
CHROME
METAL
NORMAL : 0 CrO2 : 2.5 METAL : 2.5
NORMAL : 4.5 CrO2 : 7 METAL : 10.7
METAL : 0.6 OTHER : 0
L109 RTF-101
L101, L102 RTF-161
L103, L104 RTF-1002
L105, L106 RTF-129
L107, L108 RTF-1004
L302 RTD-042
TAPE TRANSPORT UNIT (DECK I)
PB ON - OFF
PACK ON - OFF
HIGH ON - OFF
TAPE TRANSPORT UNIT (DECK II)
METAL ON - OFF
CrO2 ON - OFF
PB ON - OFF
PACK ON - OFF
REC INH A ON - OFF
REC INH B ON - OFF
TR. UNIT
Q1801 2SD1796
TRANS S UNIT
LINE VOLTAGE SELECTOR
POWER TRANSFORMER T1: RTT1021
240V (GRY)
220V (RED)
120-127V (ORG)
110V (YEL)
(WHT)
AC 19.4V
AC POWER CORD PDG1013
AC 110/120-127/220/240V 50/60 Hz
POWER SW UNIT
S1801 : RSA-069
MAIN UNIT
REC SW UNIT
CONTROL SW UNIT
D1301 D1302 SEL2910A
S1301 S1308 RSG-155
S1401 S1404 RSG-156
S1405 RSH1007
VRT86V5222
VRT86V5104
RCP-031
VRT06V5223
VR101~VR106
VR107, VR108
VR301, VR1008
VR303~VR304
LINE MUTE
I/II STOP
TEL
ENCODE
SONG
SINGLE WAY
I DISP
II DISP
IND A
IND B
IND C
IND D
RELAY IND
PAUSE
REC
REC MUTE
RELAY
TIMER
TEST
GND
COPY IND
COPY
REMOTE
Vcc
I-SEL
II-SEL
REW
REV PLAY
STOP
FWD PLAY
FF
X1 COPY
X2 COPY
(RARA REC)
II SEL IND
I SEL IND
I PACK DETECT
I PLAY SW
(I-REC INH A)
(I-REC INH B)
RESET
POWER OFF
I-SOL A
I-SOL B
I-PB SW
I-PB SOL
I SENSING
I-CPM CONT
II-X2 CONT
II-CPM CONT
(I-BIAS)
(I-REC MUTE)
II-SOL A
II-SOL B
II SENSING
II-REC MUTE
II-BIAS
II-REC INH B
II-REC INH A
II PACK DETECT
II PLAY SW
CASSETTE IN : 0 OUT : 5
HEAD BASE UP : 0 DOWN : 5
REC ENABLE : 0 INHIBIT : 5
BIAS ON : 4.6 OFF : 0
MUTE ON : 4.7 OFF : 0
REC OUT -15.2dBv
REC OUT -7.4dBv
MON OUT -7.4dBv
TP1 DOL. L
TP2 DOL. R
F101 RTF-165
F102 RTF-161
L101 RTF-161
L102
L103 19mH
L104
ENCODE : 0 DECODE : 10.5
NR ON : 2.7 NR OFF : 12
DOLBY-C : 2 OTHER : 12
B/C ON/OFF
R/P
INTERNAL TR : 70μs ON OTHER : OPEN (Pin 15, 161)
I-120μs : 0 70μs : 2.1
I-120μs : 0 70μs : 2.5
I-70μs
II-70μs
I-PB
II-PB
I-PB : 0 OTHER : 2.3
II-PB : 0 OTHER : 4.6
II-PB : 4.6 OTHER : 0
REC EQ ADJ.
REC LEVEL ADJ.
ENCODE : ON OTHER : OFF
SOL A
SOL B
CM
HOLE IC
PB PACK HIGH
CrO2 PACK REC INH A B
METAL PB
22k x4 R427 (1/4)
22k x7 R425 (1/2)
R427 (2/4)
R427 (3/4)
R427 (4/4)
R425 (2/2)
R426 22k x4
ENCODE : 5 DECODE : 0
MUTE OFF : 5 ON : 2.5
X1 : 4.7 X2 : 0
X1 : 5 X2 : 0
X1 : 5 X2 : 0
X1 : 5


IC106 : LINE OUT SELECT (5,6Pin) H : DOLBY L : dbx
LEVEL METER UNIT
IC1001 : METER IC
VR1001 : REC VOLUME
IC602 : HEAD PHONE AMP
HEAD PHONE UNIT
IC601 : MS
0603 : MS SENSITIVITY SELECT
PIN JACK UNIT (1/2)
IC1. RESISTORS:
Indicated in Ω, ¼W, ⅓W, ±5% tolerance unless otherwise noted k : kΩ, M : MΩ. (F) : ±1% (G) : ±2%, (K) : ±10% (M) ; ±20% tolerance
2. CAPACITORS
Indicated in capacity (μF)/voltage (V) unless otherwise noted p : pF
Indication without voltage is 50V except electrolytic capacitor.
3. VOLTAGE, CURRENT
V Signal voltage at W+ W, 8Ω output (1kHz)
DC voltage (V) at no input signal
Value in ( ) is DC voltage at rated power
mA DC current at no input signal
mV Signal voltage at FM 1kHz ± 75kHz DEV.
4. OTHERS
Signal route
Adjusting point
The ! mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation
* marked capacitors and resistors have parts numbers.
This is the basic schematic diagram, but the actual circuit may vary due to improvements in design
The underline indication the switch position
SWITCHES:
CONTROL SW UNIT
S1301 DECK I ON - OFF
S1302 DECK II ON - OFF
S1303 ◀◀ ON - OFF
S1304 PLAY ◀ ON - OFF
S1305 STOP ■ ON - OFF
S1306 PLAY ▶ ON - OFF
S1307 ▶▶ ON - OFF
S1308 SYNCHRO COPY NORMAL ON - OFF
S1309 SYNCHRO COPY HIGH ON - OFF
REC SW UNIT
S1401-1 PAUSE ⏸ ON - OFF
S1401-2 REC ● ON - OFF
S1401-3 MUTE ○ ON - OFF
S1401-4 RELAY I ⟷ II
S1405 TIMER REC - OFF - PLAY
DOLBY SW UNIT
S1501 DOLBY NR OFF - B - C
S1502 REV MODE
REC SW UNIT
CONTROL SW UNIT
ENCODE : ON OTHER : OFF
0901, 902 : BUFFER AMP
0903, 904 : SWITCHING (PB → ON)
0907-910 : LOW PASS FILTER
IC913 : dbx IC
Q911, 912 : SWITCHING (REC → ON)
Q915 : VOLTAGE REGULATOR
Q916 : SWITCHING (PB → ON)
Q917-919 : SWITCHING (REC → ON)
VR901 : RECOVERY TIME ADJ.
IC914 : FLAT AMP
dbx UNIT
IC105 : SELECT (5,6 Pin)
MODE NR OFF DOLBY dBx
STOP 10.1 0
PLAY 9.4 0
REC 10.1 0
COPY 11.5 9.1
IC106 : SELECT (5,6Pin)
MODE NR OFF DOLBY dBx
STOP 11.5 9.1
PLAY 9.4 0
REC 11.5 9.1
COPY 10.1 0
DOLBY & dbx UNIT
DOOR INDICATOR II UNIT
DOOR INDICATOR I UNIT
PIN JACK UNIT (2/2)
CT-1280WR (SD, SD/G)

NOTE:
The indicated semiconductors are representative ones only. Other alternative semiconductors may be used and are listed in the parts list.

6. ADJUSTMENTS

6.1 MECHANICAL ADJUSTMENTS

Door Damping Check and Adjustment

Set the door spring of DECK I side to position (A) as shown in Fig. 6-2. Then, erect the front panel A Assembly vertically as shown in Fig. 6-1. Open the doors of DECK I and DECK II at the same time. At this point, confirm that the difference between opening degree of both doors is within 15mm when one side of the door is opened completely. When this standard is not satisfied, change the door spring installation position of DECK I and perform the adjustment as follows:

- When the opening action of the door of DECK I is later than that of DECK II: Change (A) in Fig. 6-2 to that in (B) of DECK II.
- When the opening action of the door of DECK I is faster than that of DECK II: Change (A) in Fig. 6-2 to that in (B) of DECK I.

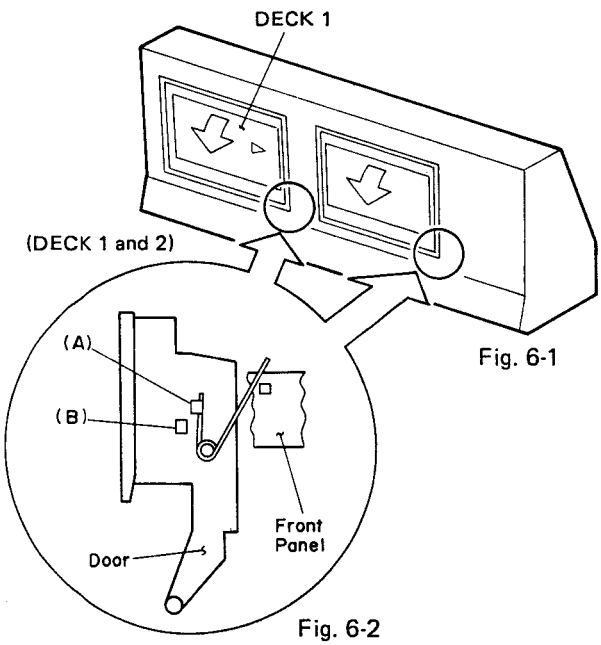


Fig. 6-1

Fig. 6-2

Tape Speed Adjustment

1. Load the STD-301 test tape into DECKs I and II.
2. Connect TP. 16 (TP. 17 on DECK II) to GND with the deck in normal PLAY mode. Then switch DECK I into the (double-speed) PLAY state and confirm that the frequency becomes 6000Hz± 600Hz.
3. Stop the DECK I operation and put DECK II into (double-speed) PLAY state, and adjust with VR304 so that the frequency becomes ±10Hz against that of DECK II.
4. After releasing the short circuit mentioned in step 2, put DECK I into normal speed PLAY state, and adjust with VR302 so that the frequency of it becomes 3000Hz±5Hz.
5. Stop the DECK I operation and put DECK II into normal speed PLAY state, and adjust with VR303 so that the frequency becomes ±5Hz against DECK I.

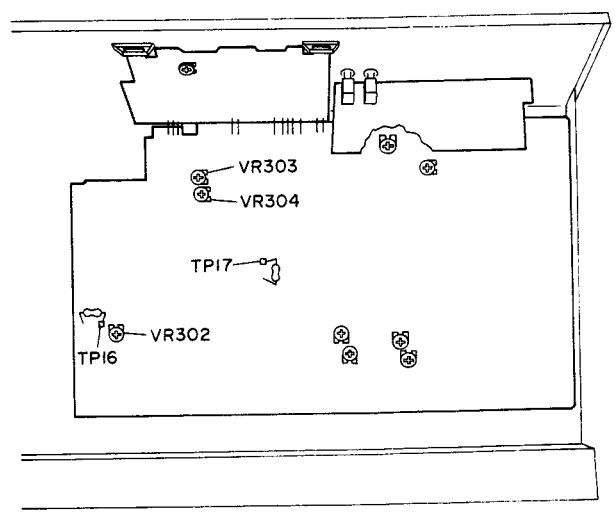


Fig. 6-3 Tape speed adjustment

6.2 DOOR PANEL POSITION CHECK

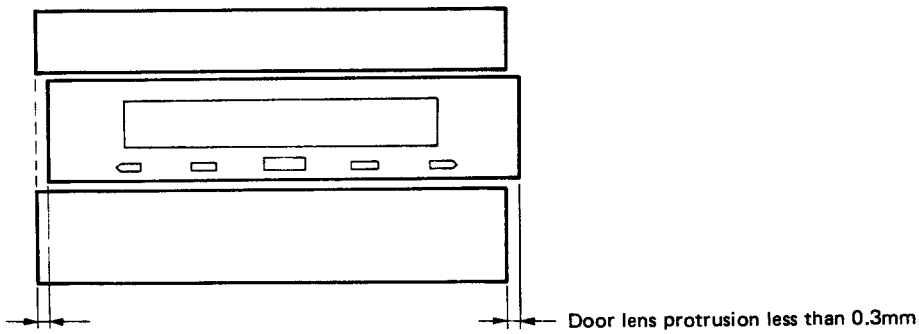


Fig. 6-4

6.2 ELECTRICAL ADJUSTMENTS

Adjustment Conditions

1. The mechanical ajustments must be completed first.
2. The head must be cleaned and demagntetized.
3. Allow the deck to age for at least a few minutes before commencing any electrical adjustments.
4. The reference signal is 0dBv=1Vrms.
5. Connect a 50 kilo-ohm(or between 47 to52 kilo-ohm)load resistance to the OUTPUT terminals.
6. Unless otherwise specified, the swithes listed below are left in the positions indicated.
   DOLBY NR :OFF
   TAPE SELECTOR :NORM

Test Tapes

STD-331B :Playback adjustments (See Fig. 6-5)
STD-608A :NORMAL blank tape
STD-620 :CrO2 blank tape
STD-610 :METAL blank tape

List of Adustments

Playback sections
1. Head azimuth adjustment.
2. Playback frequency response check.
3. Playback level adjustment.
4. Playback time constant switching check.

Recording sections
1. Erase current adjustment.
2. Recording bias adjustment.
3. Recording level adjustment.
4. Recording and playback frequency response check.
5. Copy mode playback frequency response check.
6. Level meter check.
7. dbx system recovery time adjustment.

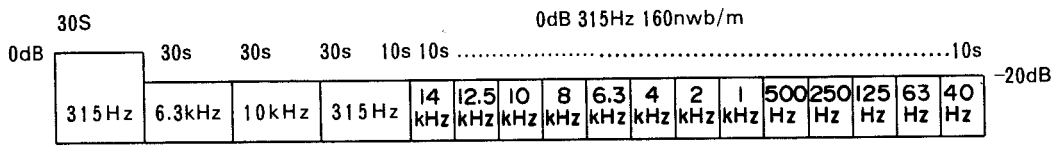


Fig. 6-5 Constants of the test tape STD-331B

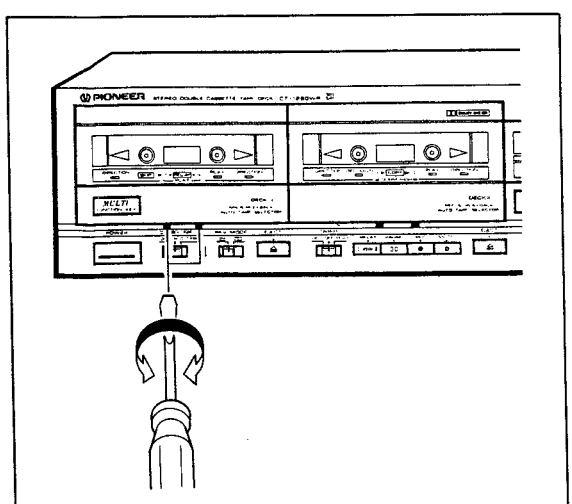


Fig. 6-6 Head azimuth adjustment

Test tape	STD-331B
Tape selector	NORM
DOLBY NR switch	OFF

• Due to "edge effect", compensate the right changed by -1dB at 63Hz, 125Hz at -0.5dB.

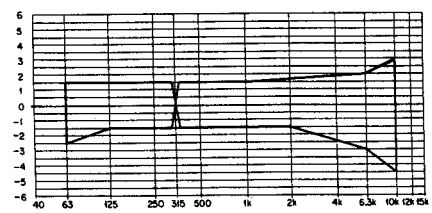


Fig. 6-7 Allowable playback frequency response zone

Deck I and II

(PLAYBACK SECTION)

1. Head Azimuth Adjustment
- Turn VR103, 104 (Deck I) or VR101, 102 (Deck II) to mechanical center positions.

NO	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	PLAY	Play the 10kHz/−20dB section of STD-331B test tape.	Head azimuth adjustment screw. (See Fig. 6-6)	LINE OUT	Maximum playback signal level.	
2.	STOP	Lock the screw with screw lock after completing adjustment.				

2.Playback Frequency Response Check

NO	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	PLAY	STD-331B	———	LINE OUT	The allowable zone shown in Fig. 6-7 is to be satisfied.	

3.Playback Level Adjustment
- This adjustment determines the DOLBY NR level, and must be performed with great care.

NO	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	PLAY	Play the 315Hz/0dB section of the STD-331B test tape.	Deck I	VR103 (Lch) VR104 (Rch)	TP. DOL L (Lch)(TP1) TP. DOL R (Rch)(TP2)	−15.2dBv	
			Deck II	VR101 (Lch) VR102 (Rch)			

4. Playback Time Constant Switching Check
- Put the deck into playback mode with no cassette loaded.
- Check that the noise level changes at the line playback output terminals when the TAPE SELECTER switch is changed.

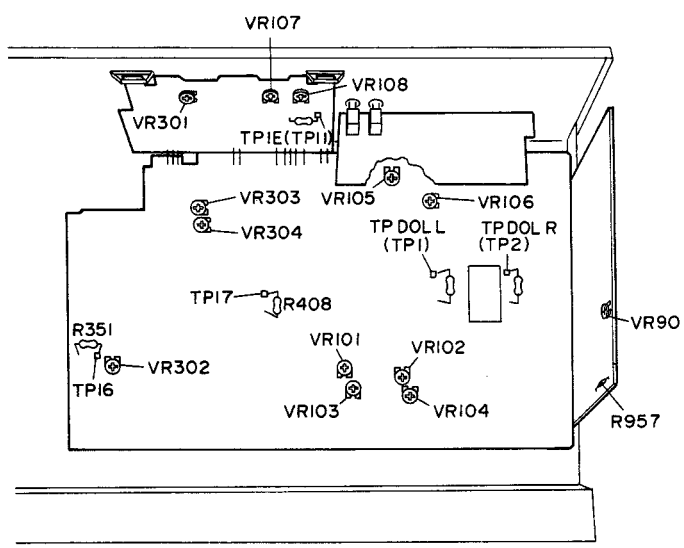


Fig. 6-8 Adjustment locations

Deck II

(RECORDING SECTION)

1.Erase Current Adjustment

NO	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	REC	Load the STD-610 test tape with no input signal.	Deck II	VR301	TP. IE (TP11)	180mV AC	

2.Recording Bias Adjustment

•After the adjustment, caution should be exercised so as not to become under bias by checking the distortion rate.

NO	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	STOP	Set the TAPE SELECTOR switch to the NORM position.					
2.	REC	STD-608A(NORM) -20dB	Deck II	VR107 (Lch) VR108 (Rch)	LINE OUT	1.0 dB ±0.5dB (6.3kHz/315Hz)	

3.Recording Level Adjustment

NO	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	STOP	Set the TAPE SELECTOR switch to the NORM position.					
2.	REC PAUSE	Apply a 315Hz/0dBv signal to the Line Input terminals.	Rec Level control		TP. DOL L (Lch) TP. DOL R (Rch)	-15.2dBv	
3.		Set the DOLBY NR switch to the ON position.(DOLBY B)					
4.	REC/ PLAY	Record the above signal onto the STD-608A test tape, and playback.	Deck II	VR105 (Lch) VR106 (Lch)	TP. DOL L (Lch) TP. DOL R (Rch)	-15.2dBv	
5.	STOP	Set the TAPE SELECTOR switch to the CrO2 position.					
6.	REC/ PLAY	Record the above signal onto the STD-620 test tape, and playback.	Confirm		TP. DOL L (Lch) TP. DOL R (Rch)	-15.2±1.5dBv	
7.	STOP	Set the TAPE SELECTOR switch to the METAL position.					
8.	REC/ PLAY	Record the above signal onto the STD-610 test tape, and playback.	Check		TP. DOL L (Lch) TP. DOL R (Rch)	-15.2±1.5dBv	

4.Recording and Playback Frequency Response Check

NO	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	STOP	Set the TAPE SELECTOR switch to the NORM position.				
2.	REC/ PLAY	STD-608A(NORM) NR:OFF/ON(TYPE B, C)	Check	LINE OUT	The allowable zone shown in Fig. 6-9 is to be satisfied.	

3.	STOP	Set the TAPE SELECTOR switch to the CrO2 position.				
4.	REC/ PLAY	STD-620(CrO2) NR:OFF/ON(TYPE B, C)	Check	LINE OUT	The allowable zone shown in Fig. 6-9 is to be satisfied.	
5.	STOP	Set the TAPE SELECTOR switch to the METAL position.				
6.	REC/ PLAY	STD-610(METAL) NR:OFF/ON(TYPE B, C)	Check	LINE OUT	The allowable zone shown in Fig. 6 – 9 is to be satisfied.	

5.Copy Mode Playback Frequency Response Check

- DOLBY NR OFF.
- Playback after making copy should be carried out by on the REC/PB side.

NO	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	STOP	Set the TAPE SELECTOR switch to the NORM position.				
2.	COPY & HIGH SPEED	Load the STD-331B test tape into deck I , and the STD-608A test tape into deck II.	———	———	Copy recorded signal from STD-331B(at both nomal and double speeds.)	
3.	PLAY (Deck II)	Play the signal recorded on the STD-608A test tape in the previous adjustment procedure	Check	LINE OUT	The allowable zone shown in Fig. 6-10 is to be satisfied.	
4.	STOP	Set the TAPE SELECTOR switch to the CrO2 position.				
5.	Load the STD-620 test tape into deck II , and repeat steps 2 and 3 to check that the allowable zone shown in Fig. 6-10 issatisfied.					
6.	STOP	Set the TAPE SELECTOR switch to the METAL position.				
7.	Load the STD-610 test tape into deck II , and repeat steps 2 and 3 to check that the allowable zone shown in Fig. 6-10 is satisfied.					

6.Level Meter Check

NO	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	REC PAUSE	Apply a 315Hz/–10dBv (316mV) signal to the Line Input terminals.	Rec Level control	TP. DOL L (Lch) TP. DOL R (Rch)	Check that the level meters "0dB" light up within –15.2dBv±2dB of the signal output level.	

7.dbx System Recovery Time Adjustment

NO	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	STOP	None	VR901	R957 terminals	DC15mV	

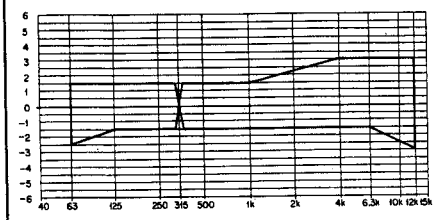
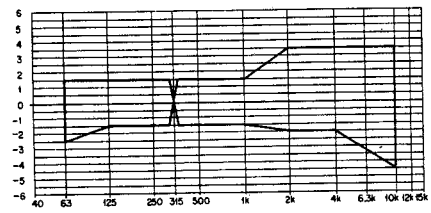
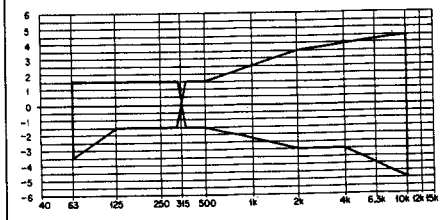
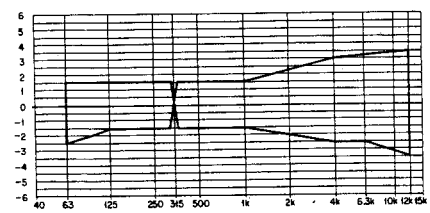
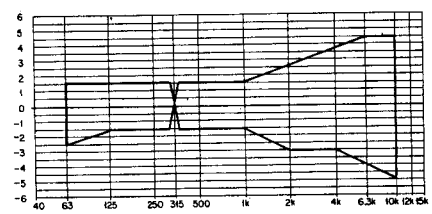
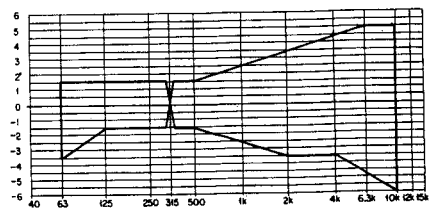
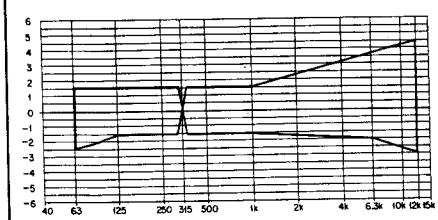
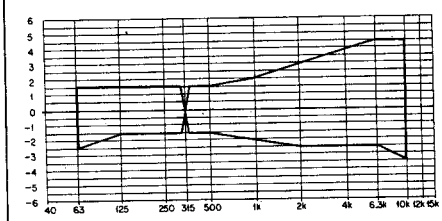
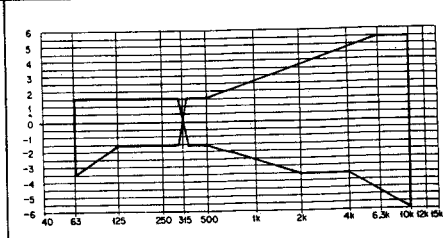
Test Tape : STD-608A		
TAPE SELECTOR : NORM		
DOLBY NR : OFF	DOLBY NR : B-TYPE ON	DOLBY NR : C-TYPE ON
		
Test Tape : STD-620		
TAPE SELECTOR : CrO_2		
DOLBY NR : OFF	DOLBY NR : B-TYPE ON	DOLBY NR : C-TYPE ON
		
Test Tape : STD-610		
TAPE SELECTOR : METAL		
DOLBY NR : OFF	DOLBY NR : B-TYPE ON	DOLBY NR : C-TYPE ON
		

Fig. 6-9 Allowable recording and playback frequency response zone

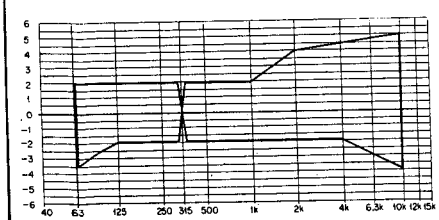
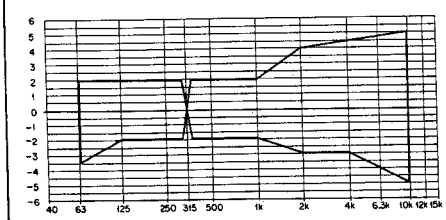
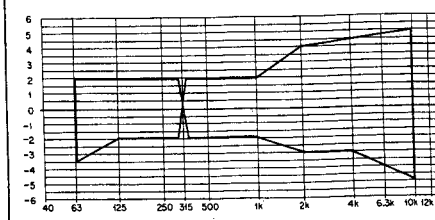
Test Tape : STD-608A	Test Tape : STD-620	Test Tape : STD-610
TAPE SELECTOR : NORM	TAPE SELECTOR : CrO_2	TAPE SELECTOR : METAL
DOLBY NR : OFF	DOLBY NR : OFF	DOLBY NR : OFF
		

Fig. 6-10 Copy mode allowable recording and playback frequency response zone

6. RÉGLAGE

6.1 RÉGLAGE MÉCANIQUE

Contrôle et Réglage de l'Amortisseur de Trappe

Placer le ressort de trappe du côté de la platine I sur la position (A) comme indiqué dans la Fig. 6-2. Redresser ensuite verticalement l'ensemble A du panneau avant comme indiqué dans la Fig. 6-1. Ouvrir les trappes de la platine I et de la platine II en même temps. A ce point, s'assurer que la différence entre le degré d'ouverture des deux trappes est de moins de 15mm lorsqu'un côté de la trappe est complètement ouvert. Lorsque cette valeur est différente de la valeur standard mentionnée, changer la position de mise en place du ressort de trappe de la platine I et effectuer un réglage comme suit:

- Lorsque l'action d'ouverture de la trappe de la platine I se fait plus lentement que celle de la platine II: Changer (B) dans la Fig. 6-2 à (A) pour la platine II.
- Lorsque l'action d'ouverture de la trappe de la platine I se fait plus lentement que celle de la platine II: Changer (B) dans la Fig. 6-2 à (A) pour la platine II.

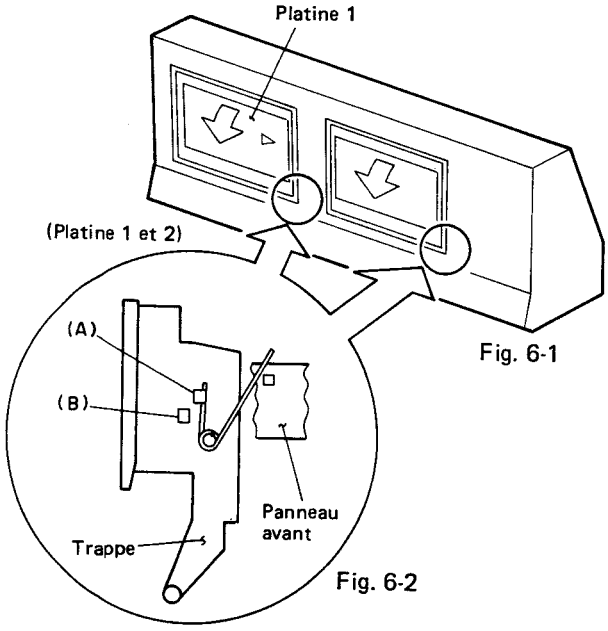


Fig. 6-1

Fig. 6-2

Réglage de la vitesse de bande

1. Mettre la bande d'essai STD-301 en place dans les platines I et II.
2. Connecter TP. 16 (TP. 17 sur PLATINE II) à GND avec la platine dans le mode de lecture normale.
   Mettre ensuite la platine I dans le mode de reproduction à vitesse double et s'assurer que la fréquence est bien de 6000Hz±600Hz.
3. Arrêter la platine I et mettre la platine II dans le mode de reproduction à vitesse double, puis ajuster avec VR304 de manière à ce que la fréquence devienne celle de la platine II±10Hz.
4. Après avoir retiré le court-circuit mentionné à l'étape 2, mettre la platine I en mode de reproduction à vitesse normale et ajuster avec VR302 pour que sa fréquence devienne 3000 Hz±5Hz.
5. Arrêter le fonctionnement de la platine I et mettre la platine II en mode de reproduction à vitesse normale, puis ajuster avec VR303 pour que la fréquence devienne celle de la platine I ±5Hz.

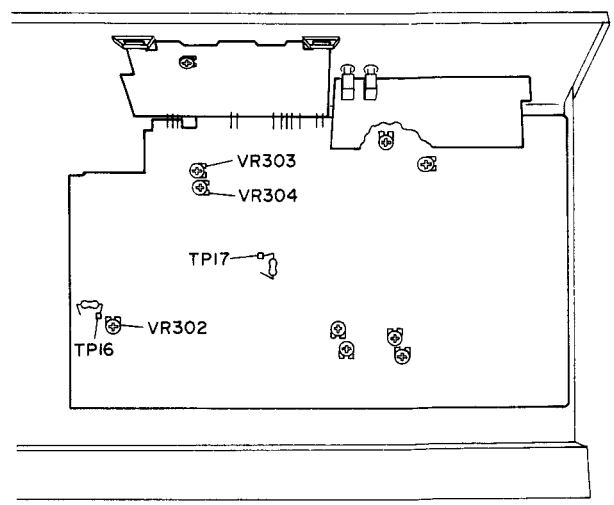
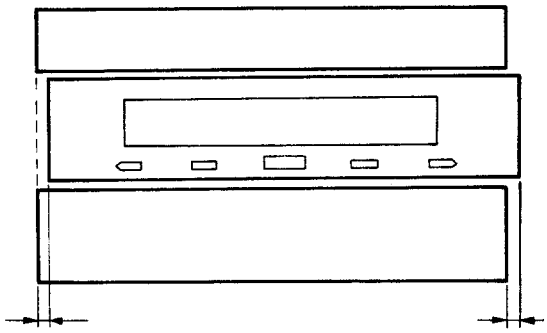


Fig. 6-3 Réglage de la vitesse de bande

6.2 VÉRIFICATION DE LA POSITION DU PANNEAU DE LA TRAPPE



La vitre de la trappe doit dépasser de moins de 0,3mm.

L'espace entre le panneau de la trappe et l'enoadrement doit être inférieur à 0,3mm.

Fig. 6-4

6.2 RÉGLAGES ÉLECTRIQUES

Conditions de réglage

1. Les réglages mécaniques doivent avoir étés effectués préalablement.
2. La tête doit être nettoyée et démagnétisée.
3. Laisser le platine sous tension pendant quelques minutes avant de commencer les réglages électriques.
4. Le signal de référence est 0dBv=1V eff.
5. Connecteur une résitance de charge de 50 kilo-ohms (ou comprise entre 47 et 52 kilo-ohms) aux prises de sortie (OUTPUT).
6. Sauf mention contraire, les commutateurs suivants doivent rester sur la position indiquée.
   DOLBY NR : OFF (Hors fonction)
   TAPE SELECTOR : NORM

Bandes d'étalonnage

STD-331B : Réglages de lecture (Voir Fig. 6-5)
STD-608A : Bande vierge NORMALE
STD-620 : Bande vierge VrO_2.
STD-610 : Bande vierge METAL

Liste des réglages

Sections de lecture

1. Réglage d'azimuth de tête magnétique.
2. Vérification de la réponse en fréquence de lecture.
3. Réglage du niveau de lecture.
4. Vérification de commutation de la constante de temps de lecture.

Sections d'enregistrement

1. Réglage du courant d'effacement.
2. Réglage de la polarisation d'enregistrement.
3. Réglage du niveau d'enregistrement.
4. Vérification de la réponse en fréquence d'enregistrement et de lecture.
5. Vérification de la réponse en fréquence de lecture lors du mode de duplication.
6. Contrôle de décibelmètre.
7. Réglage du temps de récupération du système dbx.

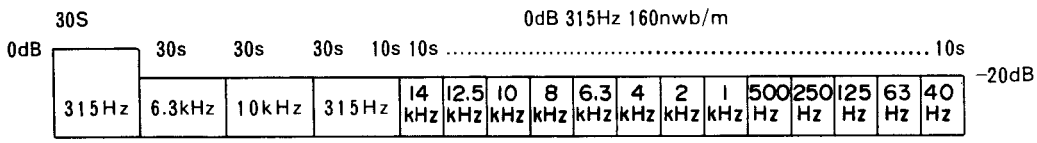


Fig. 6-5 Caractéristiques de la bande d'étalonnage STD-331B

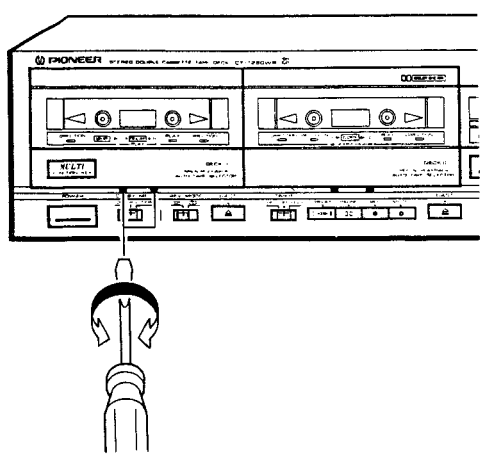


Fig. 6-6 Réglage d'azimuth de tête

Cinta de prueba	STD-331B
Selector de cinta	NORM
Interruptor DOLBY NR	OFF

• Debido al "efecto de reborde", compense el canal derecho cambiándolo en -1dB a 63Hz, -0,5dB a 125Hz.

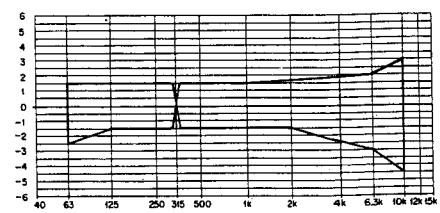


Fig. 6-7 Zone autorisée pour la réponse en fréquence de lecture

PLATINE I & II

(SECTION LECTURE)

1. Réglage d'azimuth de tête magnétique.
- Réglerles résistances variables VR103, 104 (Platine I) ou VR101, 102 (Platine II) de façon à obtenir la position centrale mécanique.

No	Mode	Signal appliqué & bande d'étalonnage	Emplacement du réglage	Emplacement du point de mesure	Valeur relevée	Observations
1.	Lecture (PLAY)	Lire le passage préenregistré de 10kHz/–20dB de la bande d'étalonnage STD-331B.	Vis de réglage d'azimuth de tête. (Voir Fig. 6-6)	Sortie de ligne (LINE OUT).	Niveau maximum du signal de lecture.	
2.	Arrêt (STOP)	Bloquer la vis de réglage à l'aide d'un produit spécial lorsque le réglage est terminé.				

2. Vérification de la réponse en fréquence de lecture.

No	Mode	Signal appliqué & bande d'étalonnage	Emplacement du réglage	Emplacement du point de mesure	Valeur relevée	Observations
1.	Lecture (PLAY)	Bande d'étalonnage STD-331B.	–	Sortie de ligne (LINE OUT).	La valeur doit se situer dans les limites admissibles représentées à la Fig. 6-7	

3. Réglage du niveau de lecture.
- Ce réglage déterminer le niveau du DOLBY NR et doit donc être exécuté avec grande précision.

No	Mode	Signal appliqué & bande d'étalonnage	Emplacement du réglage	Emplacement du point de mesure	Valeur relevée	Observations
1.	Lecture (PLAY)	Lire le passage préenregistré de 315Hz/0dB de la bande d'étalonnage STD-331B.	Platine I VR103 (canal gauche) VR104 (canal droit) Platine II VR101 (canal gauche) VR102 (canal droit)	TP. DOL L (Lch)(TP1) TP. DOL R (Rch)(TP2)	–15,2 dBv	

4. Vérification de commutation de la constante de temps de lecture.
- Placer la platine dans le mode de lecture sans charger de cassette.

- Vérifier que le niveau du bruit relevé aux prises de sortie de ligne pour lecture change lorsqu'on modifie la position du sélecteur de type de bande (TAPE SELECTOR).

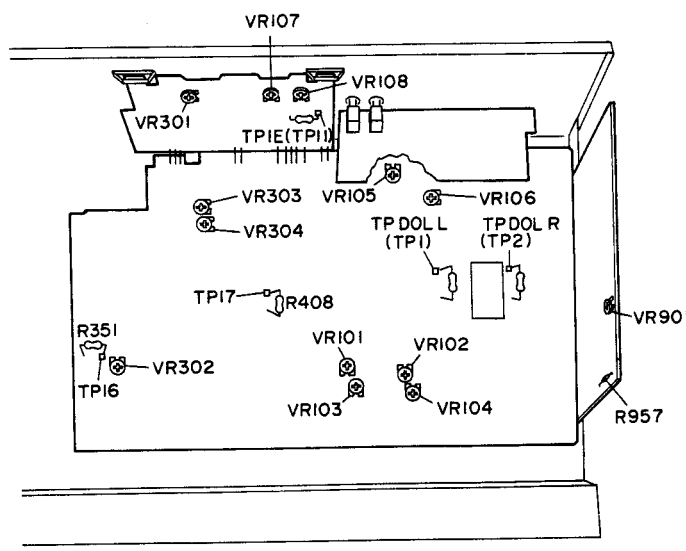


Fig. 6-8 Emplacement des réglages

Platine II

(SECTION ENREGISTREMENT)

1. Réglage du courant d'effacement.

No	Mode	Signal appliqué & bande d'étalonnage	Emplacement du réglage		Emplacement du point de mesure	Valeur relevée	Observations
1.	Enregistrement (REC)	Charger la bande d'étalonnage STD-610 pas de signal d'entrée.	Platine II	VR301	TP. IE (TP11)	180mV CA	

2. Réglage de la polarisation d'enregistrement.

- Après le réglage, vérifier la distorsion pour s'assurer de ne pas tomber en dessous de la valeur de polarisation.

No	Mode	Signal appliqué & bande d'étalonnage	Emplacement du réglage		Emplacement du point de mesure	Valeur relevée	Observations
1.	Arrêt (STOP)	Placer le sélecteur de type de bande (TAPE SELECTOR) sur la position NORM.					
2.	Enregistrement (REC)	STD-608A (NORM). −20dB	Platine II	VR107 (canal gauche) VR108 (canal droit)	Sortie de ligne (LINE OUT).	1,0dB±0,5dB (6,3kHz/315Hz)	

3. Réglage du niveau d'enregistrement.

No	Mode	Signal appliqué & bande d'étalonnage	Emplacement du réglage		Emplacement du point de mesure	Valeur relevée	Observations
1.	Arrêt (STOP)	Placer le sélecteur de type de bande (TAPE SELECTOR) sur la position NORM.					
2.	Pause à l'enregistrement (REC PAUSE)	Appliquer un signal de 315 Hz/0dBv aux prises d'entrée de ligne.	Commande de niveau d'enregistrement.		TP. DOL L (canal gauche) TP. DOL R (canal droit)	−15,2dBv	
3.		Placer le commutateur de DOLBY NR sur la position marche (ON). (DOLBY B).					
4.	Enregistrement/lecture (REC/PLAY)	Enregistrer le signal mentionné plus haut sur la bande d'étalonnage STD-608A et lire ce passage.	Platine II	VR105 (canal gauche) VR106 (canal droit)	TP. DOL L (canal gauche) TP. DOL R (canal droit)	−15,2dBv	
5.	Arrêt (STOP)	Placer le sélecteur de type de bande (TAPE SELECTOR) sur la position CrO_2.					
6.	Enregistrement/lecture (REC/PLAY)	Enregistrer le signal mentionné plus haut sur la bande d'étalonnage STD-620 et lire ce passage.	Confirmer		TP. DOL L (canal gauche) TP. DOL R (canal droit)	−15,2dBv	
7.	Arrêt (STOP)	Placer le sélecteur de type de bande (TAPE SELECTOR) sur la position METAL.					
8.	Enregistrement/lecture (REC/PLAY)	Enregistrer le signal mentionné plus haut sur la bande d'étalonnage STD-610 et lire ce passage.	Vérifier		TP. DOL L (canal gaudhe) TP. DOL R (canal droit)	−15,2±1,5dBv	

4. Vérification de la réponse en fréquence d'enregistrement et de lecture.

No	Mode	Signal appliqué & bande d'étalonnage	Emplacement du réglage	Emplacement du point de mesure	Valeur relevée	Observations
1.	Arrêt (STOP)	Placer le sélecteur de type de bande (TAPE SELECTOR) sur la position NORM.				
2.	Enregistrement/lecture (REC/PLAY)	STD-608A (NORM) DOLBY NR: OFF/ON (hors/en fonction) (TYPE B, C)	Vérifier	Sortie de ligne (LINE OUT).	La valeur doit se situer dans les limites admissibles représentées à la Fig. 6-9	

3.	Arrêt (STOP)	Placer le sélecteur de type de bande (TAPE SELECTOR) sur la position CrO_2.				
4.	Enregistrement/lecture (REC/PLAY)	STD-620 (CrO_2) DOLBY NR: OFF/ON (hors/en fonction) (TYPE B, C)	Vérifier	Sortie de ligne (LINE OUT).	La valeur doit se situer dans les limites admissibles représentées à la Fig. 6-9	
5.	Arrêt (STOP)	Placer le sélecteur de type de bande (TAPE SELECTOR) sur la position METAL.				
6.	Enregistrement/lecture (REC/PLAY)	STD-610 DOLBY NR: OFF/ON (hors/en fonction) (TYPE B, C)	Vérifier	Sortie de ligne (LINE OUT).	La valeur doit se situer dans les limites admissibles représentées à la Fig. 6-9	

5. Vérification de la réponse en fréquence de lecture lors du mode de duplication.

- DOLBY NR OFF (hours fonction).
- Effectuer la lecture sur le côté enregistrement/lecture (REC/PB) après avoir terminé la copie.

No	Mode	Signal appliqué & bande d'étalonnage	Emplacement du réglage	Emplacement du point de mesure	Valeur relevée	Observations
1.	Arrêt (STOP)	Placer le sélecteur de type de bande (TAPE SELECTOR) sur la position NORM.				
2.	Duplication & duplication à grande vitesse (COPY & HIGH SPEED)	Charger la bande d'étalonnage STD-331B dans la platine I et la bande d'étalonnage STD-608A dans la platine II.	–	–	Effectuer la copie du signal préenregistré sur la bande STD-331B (à vitesse normale et à vitesse double).	
3.	Lecture (PLAY) (Platine II)	Lire la signal enregistré sur la bande d'étallonnage STD-608A lors du réglage précédent.	Vérifier	Sortie de ligne (LINE OUT).	La valeur doit se situer dans les limites admissibles représentées à la Fig. 6-10	
4.	Arrêt (STOP)	Placer le sélecteur de type de bande (TAPE SELECTOR) sur la position CrO_2.				
5.	Charger la bande d'étalonnage STD-620 dans la platine II et répéter les étapes 2 et 3 pour s'assurer que la valeur se trouve dans les limites admissibles représentées sur la Fig. 6-10					
6.	Arrêt (STOP)	Placer le sélecteur de type de bande (TAPE SELECTOR) sur la position METAL.				
7.	Charger la bande d'étalonnage STD-610 dans la platine II et répéter les étapes 2 et 3 pour s'assurer que la valeur se trouve dans les limites admissibles représentées sur la Fig. 6-10					

6. Contrôle de décibelmètre.

No	Mode	Signal appliqué & bande d'étalonnage	Emplacement du réglage	Emplacement du point de mesure	Valeur relevée	Observations
1.	Pause à l'enregistrement (REC PAUSE)	Appliquer un signal de 315 Hz/–10dBv (315mV) aux prises d'entrée de ligne.	Commande de niveau d'enregistrement.	TP. DOL L (canal gauche) TP. DOL R (canal droit)	S'assurer que les voyants "0dB" s'allument dans les limites –15,2dBv±2dB du niveau de sortie du signal.	

7. Réglage du temps de récupération du système dbx.

No	Mode	Signal appliqué & bande d'étalonnage	Emplacement du réglage	Emplacement du point de mesure	Valeur relevée	Observations
1.	Arrêt (STOP)	Aucun	VR901	Bornes de R957.	15mV CC	

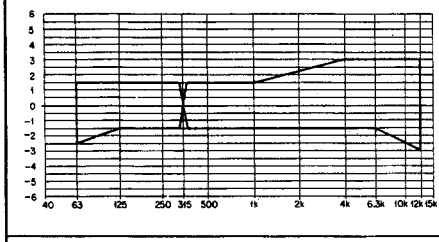
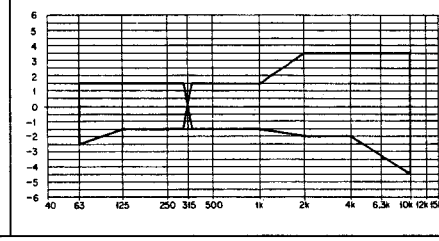
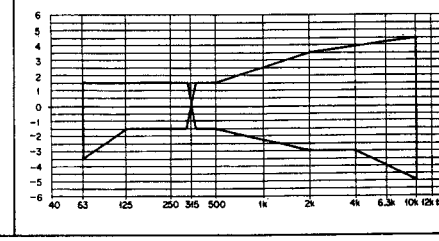
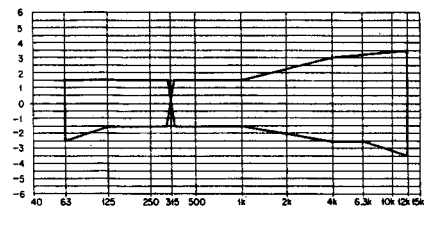
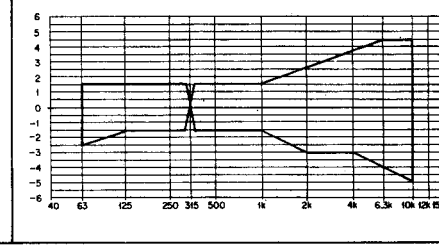
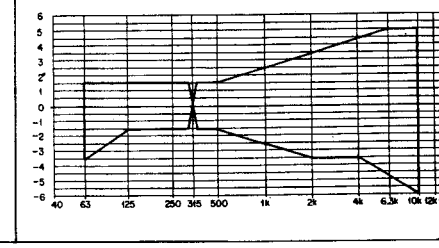
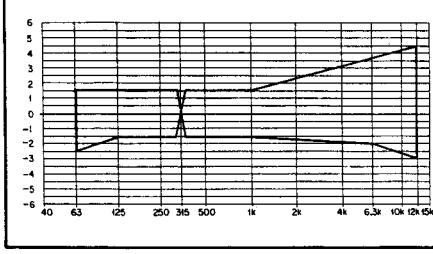
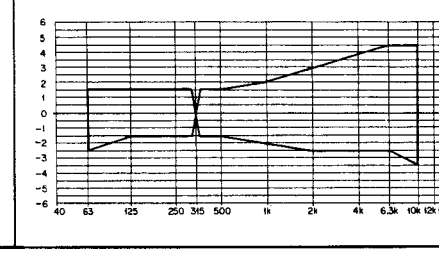
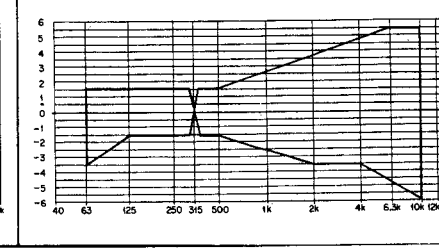
Bande d'étalonnage: STD-608A		
Sélecteur de bande: NORM		
Commutateur DOLBY NR: OFF	Commutateur DOLBY NR type-B: ON	Commutateur DOLBY NR type-C: ON
		
Bande d'étalonnage: STD-620		
Sélecteur de bande: CrO_2		
Commutateur DOLBY NR: OFF	Commutateur DOLBY NR type-B: ON	Commutateur DOLBY NR type-C: ON
		
Bande d'étalonnage: STD-610		
Sélecteur de bande: METAL		
Commutateur DOLBY NR: OFF	Commutateur DOLBY NR type-B: ON	Commutateur DOLBY NR type-C: ON
		

Fig. 6-9 Zone admissible de réponse en fréquence d'enregistrement et de lecture

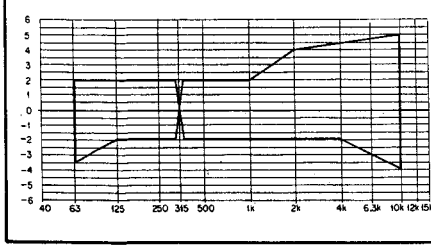
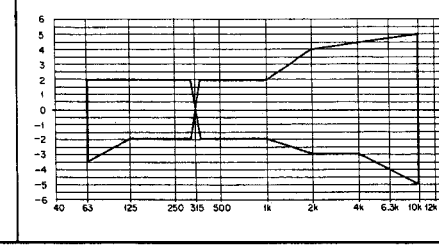
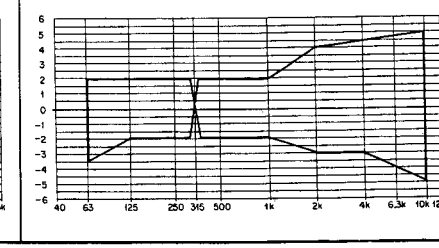
Bande d'étalonnage: STD-608A	Bande d'étalonnage: STD-620	Bande d'étalonnage: STD-610
Sélecteur de bande: NORM	Sélecteur de bande: CrO_2	Sélecteur de bande: METAL
Commutateur DOLBY NR: OFF	Commutateur DOLBY NR: OFF	Commutateur DOLBY NR: OFF
		

Fig. 6-10 Zone admissible de réponse en fréquence d'enregistrement et de lecture de mode de duplication

6. AJUSTE

6.1 AJUSTES MECANICOS

Comprobación y ajuste de la amortiguación de la puerta

Ajuste el resorte de la puerta del DECK I en la posición (A) como se muestra en la Fig. 6-2. Luego, levante verticalmente el conjunto A del panel frontal como se muestra en la Fig. 6-1. Abra las puertas de los DECK I y DECK II al mismo tiempo. Entonces, confirme que la diferencia entre el grado de abertura de ambas puertas sea de 15mm como máximo cuando se abre por completo un lado de la puerta. Cuando no se satisfacen estas medidas, cambie la posición de instalación del resorte de la puerta del DECK I y efectúe el ajuste del modo siguiente:

- Cuando la acción de abrir la puerta del DECK I sea más retardada que la del DECK II: Cambie (A) de la Fig. 6-2 a la de (B) del DECK II.
- Cuando la acción de abrir la puerta del DECK I sea más retardada que la del DECK II: Cambie (A) de la Fig. 6-2 a la de (B) del DECK II.

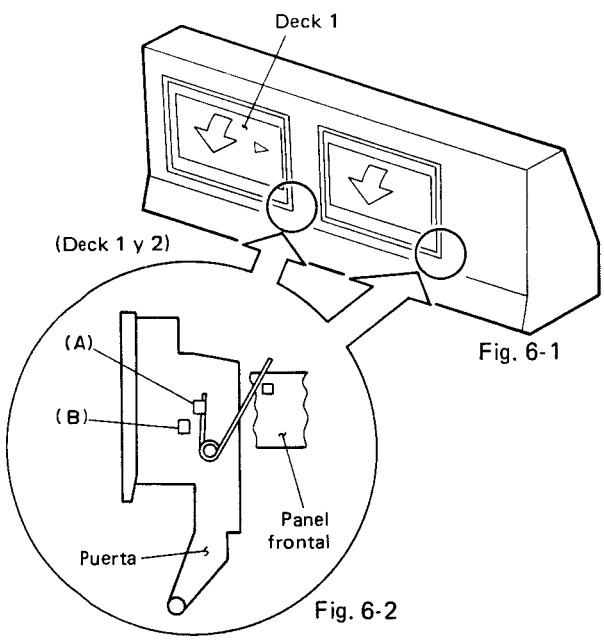


Fig. 6-1

Fig. 6-2

Ajuste de la velocidad de la cinta

1. Coloque la cinta de prueba STD-301 en los DECKs I y II.
2. Conecte TP. 16 (TP. 17 del DECK II) a GND con el deck en el modo PLAY normal. Establezca entonces el DECK I en el estado de reproducción (PLAY) (a doble velocidad), y confirme que la frecuencia sea de 6000Hz± 600Hz.
3. Detenga la operación del DECK I y establezca entonces el DECK II en el estado de reproducción (PLAY) (a doble velocidad), y ajuste el VR304 de modo que la frecuencia sea de ±10 Hz con relación a la del DECK II.
4. Después de desconectar el cortocircuito mencionado en el paso 2, establezca el DECK I en el estado de reproducción (PLAY) a velocidad normal, y ajuste el VR302 de modo que la frecuencia sea de 3000Hz±5Hz.
5. Detenga la operación del DECK I y establezca entonces el DECK II en el estado de reproducción (PLAY) a velocidad normal, y ajuste el VR303 de modo que la frecuencia sea de ±5Hz con relación a la del DECK I.

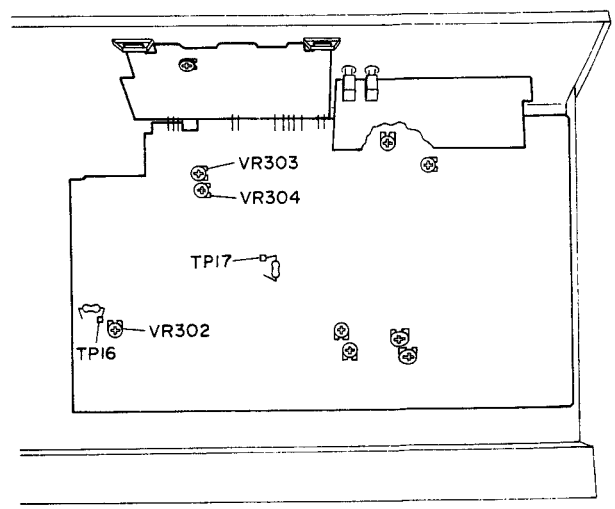
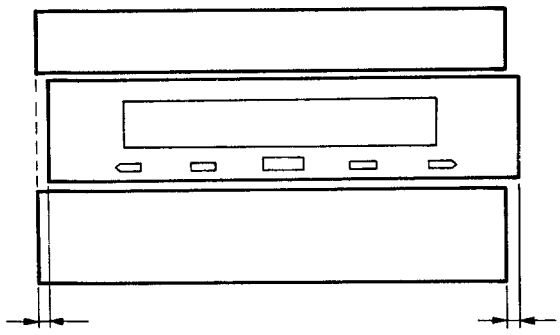


Fig. 6-3 Ajuste de la velocidad de la cinta

6.3 COMPROBACIÓN DEL NIVEL DE REPRODUCCIÓN



La parte saliente del vidrio de la puerta es de menos de 0,3mm.

El huelgo entre el panel de la puerta y la bolsa de la puerta es de menos de 0,3mm.

Fig. 6-4

6.2 AJUSTES ELECTRICOS

Condiciones de ajuste

1. Primero deben haberse realizado los ajustes mecánicos.
2. Debe limpiarse y desmagnetizarse la cabeza.
3. Deje el Deck en funcionamiento durante algunos minutos antes de iniciar los ajustes eléctricos.
4. La señal de referencia es de 0dBv= 1Vrms.
5. Conecte una resistencia de carga de 50 kohmios (o entre 47 a 52 kohmios) a los terminales de salida (OUTPUT).
6. A menos que se mencione lo contrario, los conmutadores siguientes deben estar en las posiciones indicadas.
   DOLBY NR : OFF
   TAPE SELECTOR : NORM

Cintas de prueba

STD-331B : Ajustes de reproducción (Véase la Fig. 6-5)
STD-608A : Cinta en blanco NORMAL
STD-620 : Cinta en blanco de CrO_2
STD-610 : Cinta en blanco de METAL

Lista de ajustes

Partes de reproducción

1. Ajuste azimutal de la cabeza.
2. Comprobación de la respuesta en frecuencia de reproducción.
3. Ajuste del nivel de reproducción.
4. Comprobación de la conmutación constante de tiempo de reproducción.

Partes de grabación

1. Ajuste de la corriente de borrado.
2. Ajuste de la polarización de grabación.
3. Ajuste del nivel de grabación.
4. Comprobación de la respuesta en frecuencia de grabación y reproducción.
5. Comprobación de la respuesta en frecuencia de reproducción en el modo de copia.
6. Comprobación del medidor de nivel.
7. Ajuste del tiempo de recuperación del sistema dbx.

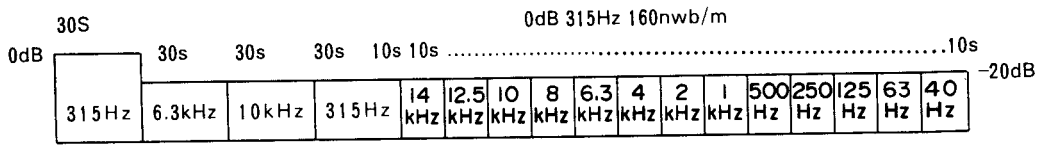


Fig. 6-5 Constantes de la cinta de prueba STD-331B

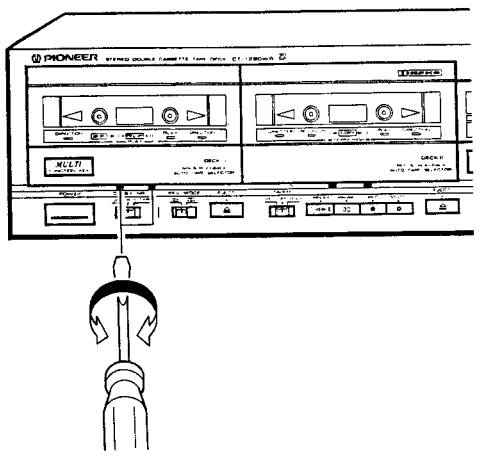


Fig. 6-6 Ajuste azimutal de la cabeza

Bande d'étalonnage	STD-331B
Sélecteur de bande	NORM
Commutateur DOLBY NR	OFF

• En raison "d'effets de bord", compenser le côté droit de −1dB à 63Hz et de −0,5dB à 125Hz.

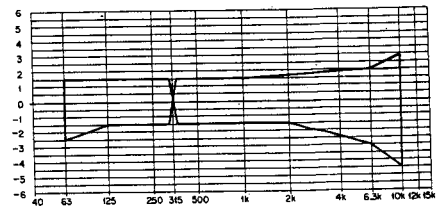


Fig. 6-7 Zona permisible de respuesta en frecuencia de reproducción

DECK I y II

(SECCION DE REPRODUCCION)

1. Ajuste azimutal de la cabeza.
- Gire el VR103, 104 (Deck I) or VR101, 102 (Deck II) a las posiciones del centro mecánico.

N.°	Modo	Señal de entrada y cinta de prueba	Punto de ajuste	Punto de medición	Valor de ajuste	Observaciones
1.	Reproducción "PLAY"	Reproduzca la parte de 10 kHz/–20dB de la cinta de prueba STD-331B.	Tornillo de ajuste azimutal de la cabeza. (Véase la Fig. 6-6)	Salida de línea (LINE OUT).	Máximo nivel de la señal de reproducción.	
2.	Parada "STOP"	Trabe el tornillo con obturador de tornillos después de haber finalizado el ajuste.				

2. Comprobación de la respuesta en frecuencia de reproducción.

N.°	Modo	Señal de entrada y cinta de prueba	Punto de ajuste	Punto de medición	Valor de ajuste	Observaciones
1.	Reproducción "PLAY"	STD-331B	—	Salida de línea (LINE OUT).	Debe satisfacerse la zona permisible mostrada en la Fig. 6-7	

3. Ajuste del nivel de reproducción.
- Este ajuste determina el nivel de DOLBY NR, por lo que debe efectuarse con mucho cuidado.

N.°	Modo	Señal de entrada y cinta de prueba	Punto de ajuste		Punto de medición	Valor de ajuste	Observaciones
1.	Reproducción "PLAY"	Reproduzca la parte de 315Hz/0dB de la cinta de prueba STD-331B.	Deck I	VR103 (canal izq.) VR104 (canal der.)	TP. DOL L (Lch)(TP1) TP. DOL R (Rch)(TP2)	–15,2dBv	
			Deck II	VR101 (canal izq.) VR102 (canal der.)			

4. Comprobación de la conmutación constante de tiempo de reproducción.
- Establezca el Deck en el modo de reproducción sin haber insertado ningún casete.

- Compruebe que el nivel ruido cambia en los terminales de salida de reproducción cuando se cambia la posición del selector de cinta (TAPE SELECTOR).

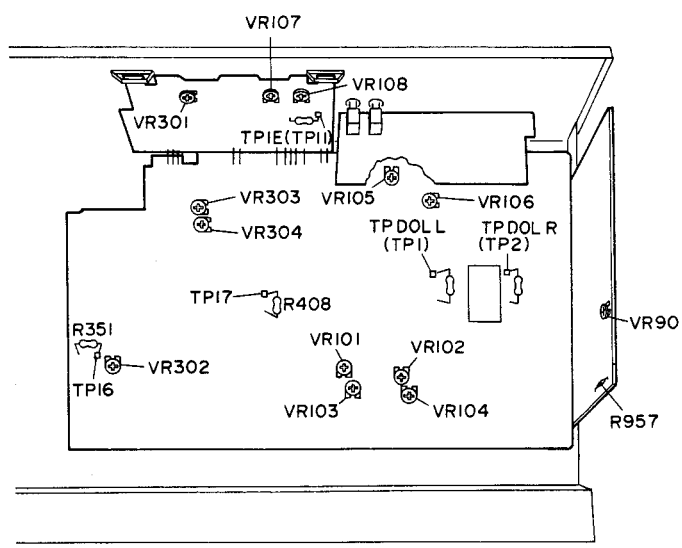


Fig. 6-8 Ajuste de la velocidad de la cinta

DECK II

(SECCION DE GRABACION)

1. Ajuste de la corriente de borrado.

N.°	Modo	Señal de entrada y cinta de prueba	Punto de ajuste	Punto de medición	Valor de ajuste	Observaciones
1.	Grabación "REC"	Inserte la cinta de prueba STD-610 sin ninguna señal de entrada.	Deck II VR301	TP. IE (TP11)	180mV AC	

2. Ajuste de la polarización de grabación.

- Después del ajuste, compruebe la distorsión y tenga cuidado en que no caiga por debajo de la polarización.

N.°	Modo	Señal de entrada y cinta de prueba	Punto de ajuste	Punto de medición	Valor de ajuste	Observaciones
1.	Parada "STOP"	Ponga el selector de cintas (TAPE SELECTOR) en la posición NORM.				
2.	Grabación "REC"	STD-608A (NORM) −20dB	Deck II VR107 (canal izq.) VR108 (canal der.)	Salida de línea (LINE OUT).	1,0dB±0,5dB (6,3kHz/315Hz)	

3. Ajuste del nivel de grabación.

N.°	Modo	Señal de entrada y cinta de prueba	Punto de ajuste	Punto de medición	Valor de ajuste	Observaciones
1.	Parada "STOP"	Ponga el selector de cintas (TAPE SELECTOR) en la posición NORM.				
2.	Pausa en grabación "REC/ PAUSE"	Aplique una señal de 315 Hz/0dBv a los terminales de entrada de línea.	Control del nivel de grabación.	TP. DOL L (canal izq.) TP. DOL R (canal der.)	−15,2dBv	
3.	Ponga el interruptor DOLBY NR en la posición ON. (DOLBY B)					
4.	Grabación/ reproducción "REC/ PLAY"	Grabe la señal de arriba en la cinta de prueba STD-608A y reprodúzcala.	Deck II VR105 (canal izq.) VR106 (canal der.)	TP. DOL L (canal izq.) TP. DOL R (canal der.)	−15,2dBv	
5.	Parada "STOP"	Ponga el selector de cintas (TAPE SELECTOR) en la posición CrO_2.				
6.	Grabación/ reproducción "REC/ PLAY"	Grabe la señal de arriba en la cinta de prueba STD-620 y reprodúzcala.	Confirme	TP. DOL L (canal izq.) TP. DOL R (canal der.)	−15,2dBv	
7.	Parada "STOP"	Ponga el selector de cintas (TAPE SELECTOR) en la posición METAL.				
8.	Grabación/ reproducción "REC/ PLAY"	Grabe la señal de arriba en la cinta de prueba STD-610 y reprodúzcala.	Compruebe	TP. DOL L (canal izq.) TP. DOL R (canal der.)	−15,2±1,5dBv	

4. Comprobación de la respuesta en frecuencia de grabación y reproducción.

N.°	Modo	Señal de entrada y cinta de prueba	Punto de ajuste	Punto de medición	Valor de ajuste	Observaciones
1.	Parada "STOP"	Ponga el selector de cintas (TAPE SELECTOR) en la posición NORM.				
2.	Grabación/ reproducción "REC/ PLAY"	STD-608A (NORM) NR: OFF/ON (TIPO B, C)	Compruebe	Salida de línea (LINE OUT).	Debe satisfacerse la zona permisible mostrada en la Fig. 6-9	

3.	Parada "STOP"	Ponga el selector de cintas (TAPE SELECTOR) en la posición CrO_2.				
4.	Grabación/ reproducción "REC/ PLAY"	STD-620 (CrO_2) NR: OFF/ON (TIPO B, C)	Compruebe	Salida de línea (LINE OUT).	Debe satisfacerse la zona permisible mostrada en la Fig. 6-9	
5.	Parada "STOP"	Ponga el selector de cintas (TAPE SELECTOR) en la posición METAL.				
6.	Grabación/ reproducción "REC/ PLAY"	STD-610 (METAL) NR: OFF/ON (TIPO B, C)	Compruebe	Salida de línea (LINE OUT).	Debe satisfacerse la zone permisible mostrada en la Fig. 6-9	

5. Comprobación de la respuesta en frecuencia de reproducción en el modo de copia.

- DOLBY NR en OFF.
- La reproducción después de haber realizado la copia debe realizarse en el lado de grabación/reproducción (REC/PB).

N.°	Modo	Señal de entrada y cinta de prueba	Punto de ajuste	Punto de medición	Valor de ajuste	Observaciones
1.	Parada "STOP"	Ponga el selector de cintas (TAPE SELECTOR) en la posición NORM.				
2.	Copia y alta velocidad "COPY y HIGH SPEED"	Inserte la cinta de prueba STD-331B en el Deck I, y la cinta de prueba STD-608A en el Deck II.	–	–	Copie la señal grabada desde la STD-331B (a las dos velocidades, la normal y la doble).	
3.	Reproducción "PLAY" (Deck II)	Reproduzca la señal grabada en la cinta de prueba STD-608A en el procedimiento de ajuste anterior.	Compruebe	Salida de línea (LINE OUT).	Debe satisfacerse la zona permisible mostrada en la Fig. 6-10	
4.	Parada "STOP"	Ponga el selector de cintas (TAPE SELECTOR) en la posición CrO_2.				
5.	Inserte la cinta de prueba STD-620 en el Deck II, y repita los pasos 2 y 3 para comprobar que se satisface la zona permisible de la Fig. 6-10					
6.	Parada "STOP"	Ponga el selector de cintas (TAPE SELECTOR) en la posición METAL.				
7.	Inserte la cinta de prueba STD-610 en el Deck II, y repita los pasos 2 y 3 para comprobar que se satisface la zona permisible de la Fig. 6-10					

6. Comprobación del medidor de nivel.

N.°	Modo	Señal de entrada y cinta de prueba	Punto de ajuste	Punto de medición	Valor de ajuste	Observaciones
1.	Pausa en grabación "REC PAUSE"	Aplique una señal de 315 Hz/–10dBv (316mV) a los terminales de entrada de línea.	Control del nivel de grabación.	TP. DOL L (canal izq.) TP. DOL R (canal der.)	Compruebe que se encienda "0dB" de los medidores de nivel dentro de –15,2dBv±2dB del nivel de salida de la señal.	

7. Ajuste del tiempo de recuperación del sistema dbx.

N.°	Modo	Señal de entrada y cinta de prueba	Punto de ajuste	Punto de medición	Valor de ajuste	Observaciones
1.	Parada "STOP"	Ninguna	VR901	Terminales R957..	15mV CC	

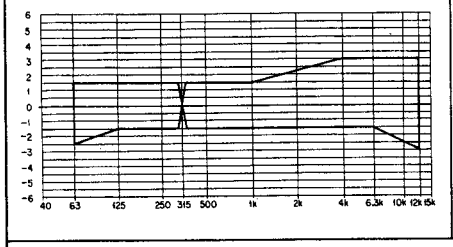
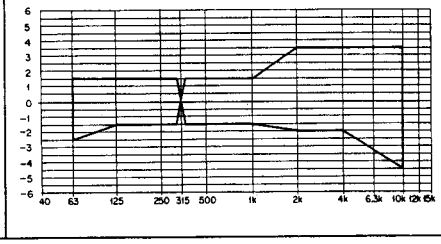
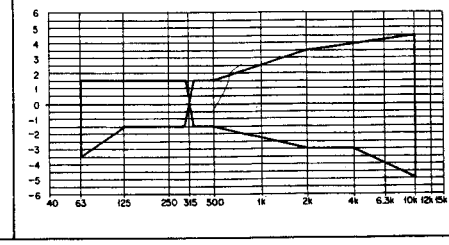
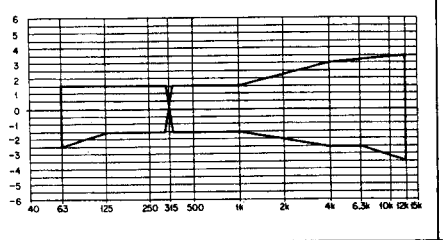
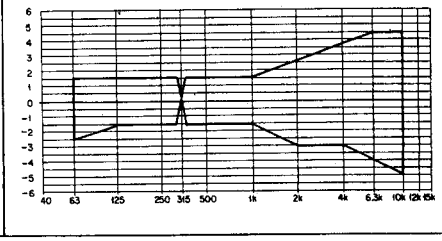
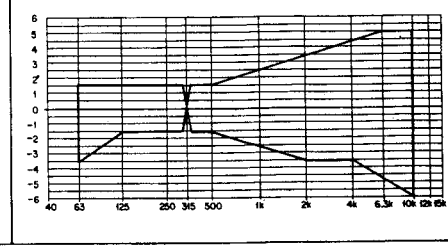
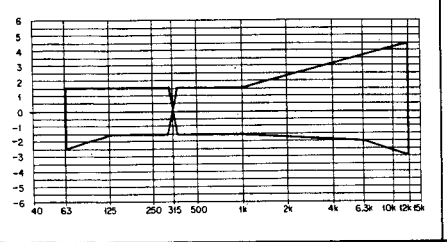
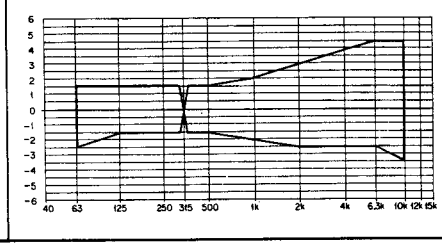
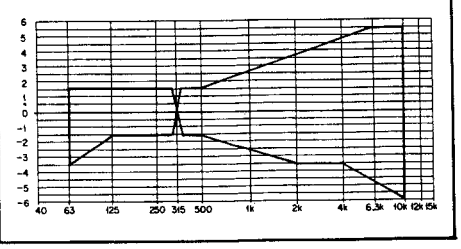
Cinta de prueba: STD-608A		
SELECTOR DE CINTA: NORM		
DOLBY NR: OFF	DOLBY NR: TIPO B en ON	DOLBY NR: TIPO C en ON
		
Cinta de prueba: STD-620		
SELECTOR DE CINTA: CrO_2		
DOLBY NR: OFF	DOLBY NR: TIPO B en ON	DOLBY NR: TIPO C en ON
		
Cinta de prueba: STD-610		
SELECTOR DE CINTA: METAL		
DOLBY NR: OFF	DOLBY NR: TIPO B en ON	DOLBY NR: TIPO C en ON
		

Fig. 6-9 Zona de respuesta en frecuencia de grabación y reproducción permisible

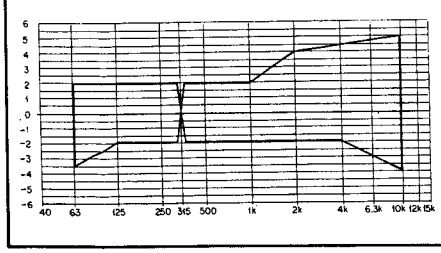
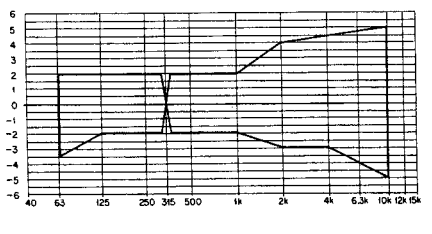
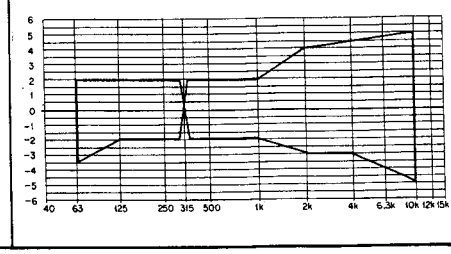
Cinta de prueba: STD-608A	Cinta de prueba: STD-620	Cinta de prueba: STD-610
SELECTOR DE CINTA: NORM	SELECTOR DE CINTA: CrO_2	SELECTOR DE CINTA: METAL
DOLBY NR: OFF	DOLBY NR: OFF	DOLBY NR: OFF
		

Fig. 6-10 Zona de respuesta en frecuencia de grabación y reproducción permisible en el modo de copia

Noise Reduction switch

This switch is used to activate the Dolby Noise Reduction System.

For dbx position:
When the switch is set to the dbx position, the dbx noise reduction system will be activated (for only SD, SD/G models).

NOTE:
There are both B and C types of Dolby NR. Always use the same type for recording and playing back the same tape. Making a memo on the cassette is helpful for remembering which type was used.

- Noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
- "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

- dbx is a trademark of dbx Incorporated.

Dolby NR and dbx indicators

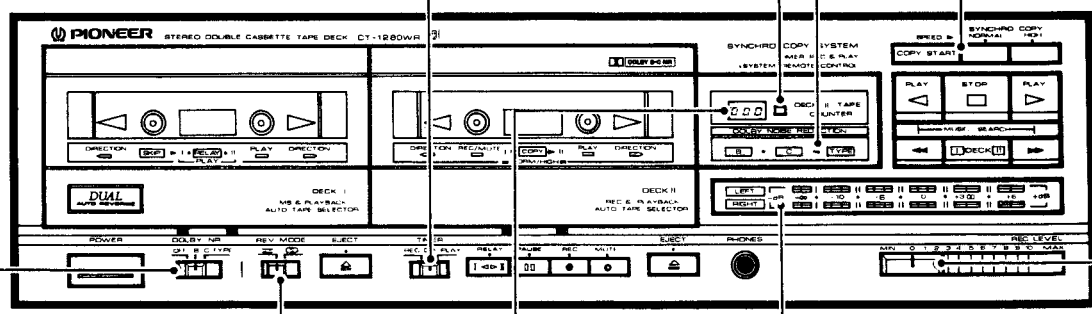
dbx: for only SD, SD/G models

TIMER switch

This switch is used for timer recording and playback when the optional Timer is used. Leave this switch off at all times when these functions are not being used.
REC: Timer recording
PLAY: Timer playback
Timer playback is possible with either DECK I or DECK II, but only DECK II can be used for timer recording.
Relay playback to DECK II is possible by starting playback with DECK I with tapes loaded into both DECK I and DECK II. If playback continues for more than 10 seconds with no sound, the fast forward function is activated to rapidly move the tape to the beginning of the next song and start playing back. This is called the blank skip function.

SYNCHRO COPY buttons

Tapes can be copied from DECK I to DECK II by loading a pre-recorded tape into DECK I and a blank tape into DECK II.
NORMAL: Starts copying at normal recording speed
HIGH: Starts copying at twice the normal recording speed



Reverse Mode switch (REV MODE)

This switch can be used for both DECK I and DECK II.
: This switch is used to record and playback one side of a tape. The tape will stop automatically when fully rewound.
: Unless the STOP button is pressed, both sides of the tape will be played back 6 times each (total of 12 sides). Both sides of the tape can be played another 6 times by pressing the PAUSE button and restarting playback.

The following operate only for DECK II.

: Select this position to record on both sides of the tape.
Auto-reverse is only possible from the [▷] to the [◁] direction. If recording is started in the [◁] direction, the tape will stop automatically at the end of the first side. To record both sides, always start from the [▷] direction.

Level Meter

of "+3 dB" indicates the reference level when using the Dolby NR System.

Recording Level Control knob (REC LEVEL)

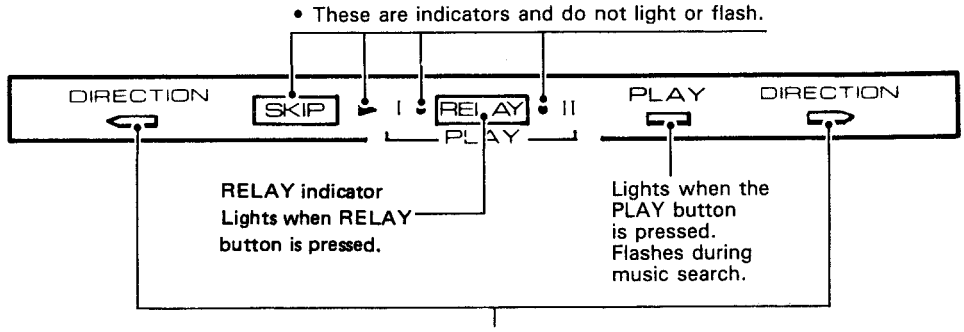
Counter Reset button

The counter reset only for DECK II.

DECK II TAPE COUNTER

This counter indicates the distance traversed by the tape loaded into DECK II.

DECK I Tape Travel Mode indicator



The direction of tape travel can be determined by checking which one lights. Indicators light or flash according to tape speed.

These indicators also light or flash for other operations. Refer to the following chart for details.

DECK I Tape Travel Mode indicator

☆: Light ☆★: Flashes ☆★☆: Flashes rapidly

Indication / Operation	[◁] In Reverse mode			In Forward Mode [▷]		
	DIRECTION	PLAY	DIRECTION	DIRECTION	PLAY	DIRECTION
Stop	☆	—	—	—	—	☆
Playback	☆	☆	—	—	☆	☆
Fast forward	☆★☆	—	—	—	—	☆★☆
Rewind	☆	—	☆★☆	☆★☆	—	☆
Playback pause	☆★	☆	—	—	☆	☆★
MS (music search)	☆★☆	☆★☆	—	—	☆★☆	☆★☆
MS (reverse music search)	☆	☆★☆	☆★☆	☆★☆	☆★☆	☆

same as DECK I

DECK II Tape Travel Mode indicator

☆: Light ☆★: Flashes ☆★☆: Flashes rapidly

Indication / Operation	[◁] In Reverse mode				In Forward Mode [▷]			
	DIRECTION	REC/MUTE	PLAY	DIRECTION	DIRECTION	REC/MUTE	PLAY	DIRECTION
Stop	☆	—	—	—	—	—	—	☆
Playback	☆	—	☆	—	—	—	☆	☆
Recording	☆	☆	—	—	—	☆	—	☆
Fast forward	☆★☆	—	—	—	—	—	—	☆★☆
Rewind	☆	—	—	☆★☆	☆★☆	—	—	☆
Recording pause	☆★	☆	—	—	—	☆	—	☆★
Playback pause	☆★	—	☆	—	—	—	☆	☆★
Recording mute	☆	☆★	—	—	—	☆★	—	☆
MS (music search)	☆★☆	—	☆★☆	—	—	—	☆★☆	☆★☆
MS (reverse music search)	☆	—	☆★☆	☆★☆	☆★☆	—	☆★☆	☆

9. FOR KC, HEM AND HB TYPES

NOTES:

- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*
  ★★ GENERALLY MOVES FASTER THAN ★
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

The CT-1280WR/KC, HEM and HB types are the CT-1280WR/KU type with the exception of the following sections.

Mark	Symbol & Description	Part No.				Remarks
		CT-1280WR/ KU type	CT-1280WR/ KC type	CT-1280WR/ HEM type	CT-1280WR/ HB type	
	Main unit*	Non supply	Non supply	Non supply	Non supply	
⚠	Trans P unit*	Non supply	Non supply	Non supply	Non supply	
	Pin Jack unit	Non supply	Non supply	Non supply	Non supply	
⚠	Strain relief	CM-22	CM-22	CM-22B	CM-22B	
	Play button	RAC1096	RAC1096	RAC1107	RAC1107	
⚠	AC Power cord	RDG-048	RDG-048	PDG1003	RDG-032	
	Badge	RAH1090	RAH1090	RAH1092	RAH1092	
	Door cover (1)	RAH1057	RAH1057	RAH1102	RAH1102	
	Door cover (2)	RAH1058	RAH1058	RAH1103	RAH1103	
	Door panel (1)	RAH1060	RAH1060	RAH1108	RAH1108	
	Door panel (2)	RAH1061	RAH1061	RAH1109	RAH1109	
	Display panel	RAH1062	RAH1062	RAH1110	RAH1110	
	Display panel (A)	RAH1063	RAH1063	RAH1111	RAH1111	
	Meter panel	RAH1064	RAH1064	RAH1112	RAH1112	
	Function panel	RAH1065	RAH1065	RAH1113	RAH1113	
⚠ ★★	Fuse (1.25A)	REK-073	REK-073	.....	.....	
⚠ ★★	Fuse (800m A)	.....	.....	REK-099	REK-099	
⚠ ★★	Fuse (800mA)	REK-079	REK-079	.....	.....	
⚠ ★★	Fuse (1.25A)	.....	.....	REK-101	REK-101	
	Operating instructions (English)	RRB1006	.....	.....	RRB1006	
	Operating instructions (English/French)	.....	RRE1010	RRE1010	.....	
	Operating instructions (German/Italian)	.....	.....	RRD1011	.....	
⚠ ★ T1	Power transformer	RTT1020	RTT1020	RTT1021	RTT1021	
	Front panel assembly	RXX1015	RXX1015	RXX1016	RXX1016	

*** Marked P.C. board assemblies:**

Regard less differences on parts numbers, the P.C. board assemblies for the additional types are identical with the KU type.

- **For HEM and HB type**

PIN JACK UNIT

The Pin Jack Unit (for CT-1280WR/HEM and HB types) is the same as Pin Jack Unit (for CT-1280WR/KU type) with the exception of following sections:

Mark	Symbol & Description	Part No.			Remarks
		CT-1280WR/ KU type	CT-1280WR/ HEM type	CT-1280WR/ HB type	
	C614	CKCYF103Z50	.....	.....	
★	D601—D603	ISS254	.....	.....	
	JA602, JA603	RKN1004	.....	.....	

P.C. BOARD PATTERNS AND SCHEMATIC DIAGRAM

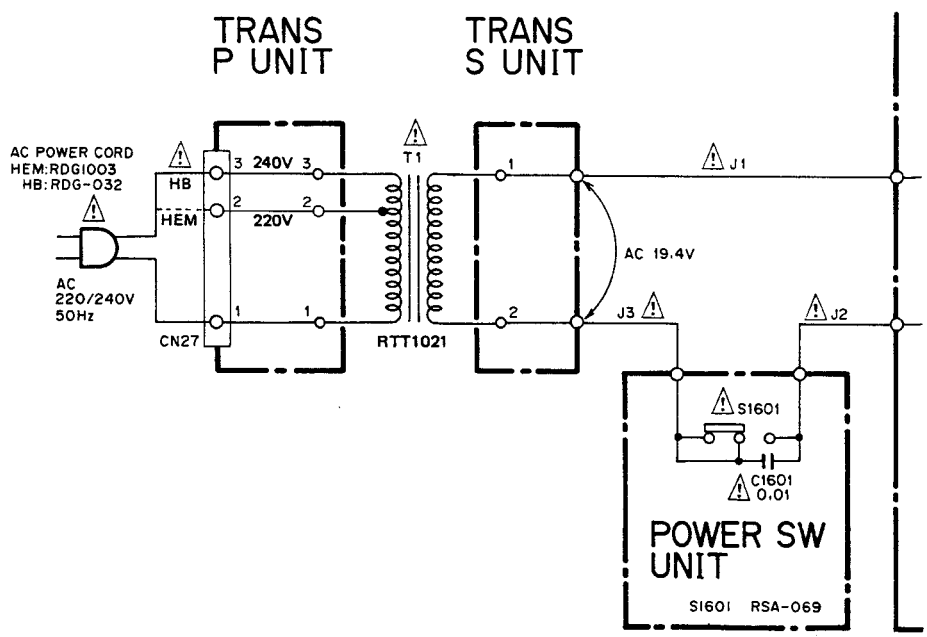
Please refer to pages 12 – 17.

LINE VOLTAGE SELECTION

Line voltage can be changed with following steps.

1. Disconnect the AC power cord.
2. Remove the top cover.
3. TUNER TYPE
   Change the connection of the TRANS P unit primary pins.
4. Stick the line voltage label on the rear panel.

Part No.	Description
AAX-193	220V label
AAX-192	240V label



10. FOR SD AND SD/G TYPES

NOTES:

- *Parts without part number cannot be supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *For your parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.*
  ★★ GENERALLY MOVES FASTER THAN ★
  This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

  Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω	*56 × 10¹*	*561*	*RD1/4PS 5 6 1 J*
47kΩ	*47 × 10³*	*473*	*RD1/4PS 4 7 3 J*
0.5Ω	*0R5*		*RN2H 0 R 5 K*
1Ω	*010*		*RS1P 0 1 0 K*

  Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ	*562 × 10¹*	*5621*	*RN1/4SR 5 6 2 1 F*

The CT-1280WR/SD and SD/G types are the same as the CT-1280WR/KU type with the exception of following sections:

Mark	Symbol & Description	Part No.			Remarks
		CT-1280WR/ KU type	CT-1280WR/ SD type	CT-1280WR/ SD/G type	
	Main unit	Non supply	Non supply	Non supply	
	Level meter unit	Non supply	Non supply	Non supply	
	Dolby & dbx SW unit	.....	Non supply	Non supply	
	Dolby SW unit	Non supply	.....	.....	
⚠	Trans P unit	Non supply	.....	.....	
	dbx unit	.....	Non supply	Non supply	
	Power switch unit*	Non supply	Non supply	Non supply	
⚠	Strain relief	CM-22	CM-22B	CM-22B	
	Play button	RAC1096	RAC1107	RAC1107	
⚠	AC power cord	RDG-048	PDG1013	PDG1013	
⚠	Line voltage selector	.....	PSB1002	PSB1002	
	Badge	RAH1090	RAH1092	RAH1092	
	Door cover (1)	RAH1057	RAH1102	RAH1102	
	Door cover (2)	RAH1058	RAH1103	RAH1103	
	Door panel (1)	RAH1060	RAH1108	RAH1108	
	Door panel (2)	RAH1061	RAH1109	RAH1109	
	Meter panel	RAH1064	RAH1112	RAH1112	
	Display panel	RAH1062	RAH1114	RAH1114	
	Display panel (A)	RAH1063	RAH1115	RAH1115	
	Function panel	RAH1065	RAH1116	RAH1116	
⚠★★	Fuse (1.25A)	REK-073	.....	.....	
⚠★★	Fuse (800mA)	.....	REK-099	REK-099	
⚠★★	Fuse (800mA)	REK-079	.....	.....	
⚠★★	Fuse (1.25A)	.....	REK-101	REK-101	
	Operating instructions (English)	RRB1006	RRB1006	RRB1006	
	Operating instructions (Spanish)	.....	RRD1005	.....	
⚠ ★ T1	Power transformer	RTT1020	RTT1022	RTT1022	
	Front panel assembly	RXX1015	RXX1017	RXX1017	
	Packing case	RHG1014	RHG1014	RHG1023	

*** Marked P.C. board assemblies:**

Regard less differences on parts numbers, the P.C. board assemblies for the additional types are identical with the KU type.

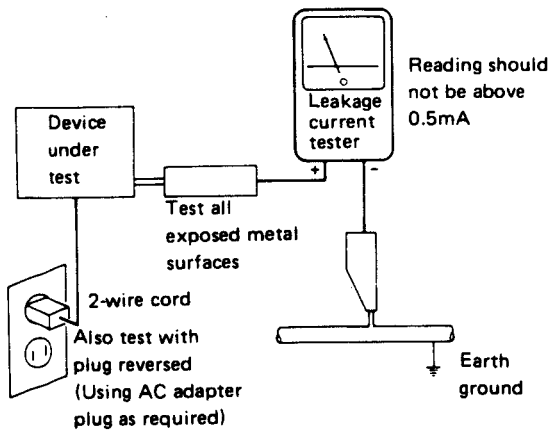
11. SAFETY INFORMATION

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.


Reading should not be above 0.5mA
Leakage current tester
Device under test
Test all exposed metal surfaces
2-wire cord
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.